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*I Made the Farm Pay  
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HOW TO  
PLANT AND GROW  
ALL HARDY FRUITS

*By*  
CHARLES A. GREEN  
ROCHESTER, N.Y.

See last Pages for  
Instructions in Bud-  
ding, Grafting and  
Propagating all kinds  
of hardy fruits, trees,  
plants and vines, also  
for Poultry Hints and  
Remedies for Poultry  
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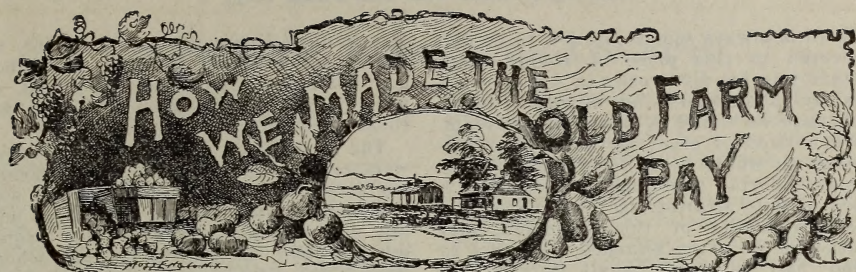
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## INTRODUCTION.

My object in giving my experience as a boy on the farm, as a business man in the city, and, again, as a fruit-grower, is not to boast of the very modest success which I have attained, but to be helpful to others, who are continually asking : What can we do to make the farm more profitable ?

Surely, I have solved this problem for myself. I have made a run-down farm, exhausted of fertility and dilapidated in every way, remarkably profitable through a series of years when great depression prevailed throughout the farming community. I have

done this as a city man, leaving the counting-house and going back into the country, from which I originally came. This also teaches that years of city life need not necessarily detract from the possibility of success when one returns to rural life.

My aim in referring to my childhood on the farm is with the hope that parents may draw some useful lessons therefrom, and that, perhaps, some of them now living in cities, may be induced to remove to the country as a means of making life enjoyable, not only to themselves, but to their children.

## EARLY RECOLLECTIONS.

### CHAPTER I.

The mother may forget her child  
That smiles sue sweetly on her knee;  
But I'll remember thee, Glencairn,  
And all that thou hast been to me.

—Burns.

Among the earliest recollections of my childhood in the country is, naturally, the old cobble-stone school-house, with one corner cracked and ready to topple over ; with wide, rude door-way, the door-sill of which had been worn by the tread of many feet ; with its old-fashioned box stove, capable of taking in sticks of cord-wood, uncut ; its rude, pine benches carved with many a jack-knife ; its little panes of window glass, through which we children looked longingly upon the green and sunny fields where we would far rather rove than to be confined to the hard benches and strict rules of teachers.

I remember the morning walks to school—how bright and pleasant those mornings were. I only remember the sunshiny ones, when all nature was gay and cheerful, the birds singing from the bushes along the way, and bees sipping honey from the flowers and thistles which grew by the roadside. Dinner pail in hand, we would usually wait until the neighbors' children came along, then gathering together would stroll loiteringly towards the school-house. I do not remember much about returning from school. Generally we were so

tired of the hard benches and the long hours, that we hurried home much more rapidly than we went, but usually took the time to imprison a few bumble bees in the pods of the milk-weeds, or some like innocent pastime.

There was a brook that meandered by the school-house, which was an unfailing source of enjoyment to the children ; in summer by wading and fishing ; in winter, by skating. The boy, bent on catching fish, would throw himself flat upon the bridge, face downward, peering under the bridge, with line distended, often remaining in this position for hours—bite or no bite—but would frequently catch some very nice fish.

There were numerous hills near the school-house and there are few things that I have enjoyed more than riding down them. As I look back upon it now I wonder that more of us were not injured, as the hills were quite steep. Sometimes larger boys would load the little boys on the front of a large sleigh and ride down the long descent, on the crusted snow. This was a very dangerous practice and I have many times nearly lost my life by such excursions. In the valleys among the hills, winter rains would often form ponds, covered with glaring ice. These were gay scenes at noon time, where boys might be seen skating, drawing girls upon sleds.

Not far from the school-house was a wood land, which also gave us infinite enjoyment.



## HOW WE MADE THE OLD FARM PAY.

There is always something new to be discovered in this piece of timber land. Stanley in his discoveries in Africa could hardly have found things of greater interest than we found in those dark retreats. When tired of other methods of amusement we would bend down the tall saplings and ride upon them. There was a bed of wild strawberries growing on the eastern border of this woodland, and although we often searched for hours to find half a dozen small berries, we thought the time well spent, they were so luscious and such a rarity; no strawberries being grown in the farmer's garden at that date. There was also a blackberry patch, near the center of this woodland, but we smaller boys were informed that there was a monstrous goblin residing near that particular spot, so we were frightened out of the blackberries; I have since been tempted to suspect that this was a scheme on the part of the larger boys, by which they were to secure all the fruit. There were no wintergreens within two or three miles of the school-house, yet we took annual excursions, in a body, to the place where wintergreens grew;

also annual excursions nearly as far, to gather spruce gum. I do not remember any nutting excursions of the school, in a body; individuals generally went by themselves for that purpose.

The methods of teaching in those days were very much inferior to those prevailing at present. I cannot say that I was very much interested in the school and did not consider myself a very bright scholar; but, on the whole, my school days in the district school are very pleasant to recollect. I shall never forget the teachers who taught that school. Many of them are my friends to the present day and occupy eminent positions. These teachers were not to be envied in the pleasure of their positions. They were obliged to govern the school by brute power, where moral suasion would not avail. There was a perpetual conspiracy on the part of the older and more vicious boys, by which the teacher was to be displaced. Often conciliatory measures were adopted by the teacher; at other times a rough and tumble sort of a combat was entered into.

## THE BOY WHO SUCCEEDS.

It is with the human race as with individuals of it, our memories go back but a little way, or if they go back far, they pick up here a date and there an occurrence half forgotten.—*Dawson.*

In every country school there is one boy who is the ring-leader. Every other boy large or small, considers him a hero and looks up to him as something remarkable to contemplate. From this great Mogul, down, there were different grades of ability, as estimated by school boys. The biggest bully was generally thought the most of. He was the strongest, biggest fighter; could jump the farthest; could wrestle and yell and swear, and do the biggest things in the biggest way, of any one. You could tell how the school boys were graded by the order in which they would get together in "Cracking the Whip," as it was called. The champion, or biggest boy of the heap, would form the butt of the whip, the next big one next, and so on down to the smallest one, who would form the cracker and get cracked so hard that his skull was hardly strong enough to stand the strain. Usually contempt was shown towards the smaller or weaker scholars. Respect was only shown those who had muscular strength or over-mastering ways, or those who could swagger around and make tremendous pretensions. As I look over the subsequent records of the school boys, as to their success in life, I find those who were held in least estimation have made the greatest success. One boy in particular was very much ridiculed because

of his peculiar ways, which were far in advance of his years. This boy was of little account according to the standard adopted by the school boys at large, but he has since become a very distinguished man and is liable to become much more so. He is now a doctor of divinity and occupies a high position. The one particular great light of the school, the leader in all muscular feats, proved a conspicuous failure in real life, in after years.

I am strongly of the opinion that the girls of the school were better scholars and gave evidence of more ability, as a rule, than the boys. They were more studious and seemed to reach conclusions with more aptness. I should fail to be a faithful biographer if I hesitated to say that upon the girls' side of the school-house there was one particular face that possessed more than ordinary charm to the writer hereof. Though this lady has long been married and is now the mother of a large family, and her husband is a prosperous man of business, this girl is not one hour older in my imagination than she was thirty-five years ago, in that old school-house. I shall always remember her with her curly hair, her red lips, and her peach-blooming cheeks. I doubt very much whether she ever knew the desperate fancy which I possessed for her, as I was a very bashful boy and particularly shy of the girls. Nevertheless, she was the heroine of my childhood.



## EXPERIENCE WITH FRUITS AND NUTS.

Off in the quiet night,  
 Ere slumber's chain has bound me.  
 Fond memory brings the light  
 Of other days around me.

The earliest useful work that I can remember of having done, was gathering black raspberries from the fence corners. I found only now and then a bush here and there. My mother encouraged me by making a delicious jam of all the berries I gathered, of which jam I, myself, was to have the exclusive eating. I remember that the jam was stored in an old, broken-nosed China tea-pot. My visits to this broken-nosed tea-pot were frequent and remarkably delightful so long as the jam lasted. At that time the black raspberry was not grown in gardens and no one had heard of the Doolittle or Gregg, or any other improved variety. It was not known then that there were any varieties; it was supposed that they were all alike. One of my neighbor boys stirred my imagination by informing me that a machine had been invented, on which a boy could be carried with lightning rapidity from one bush to another, from which he could gather berries, the machine having the instinct to know where the bushes were located and going there without any direction. I have since suspected that this was a myth.

There was a blackberry plantation on the east side of a timber lot on our farm, that bore remarkable specimens. The bushes grew so closely together one could hardly walk or force his way between them. I used to crawl out on the bodies of fallen trees and gather all that I could carry, without getting down among the bushes. I have wondered, in recent years, why the blackberry does not produce as it did in early days. Probably the soil is not so fertile from the decaying of wood and leaves.

The gathering of nuts was a delightful occupation to me, as a child. There was a wooded lot near the house, containing many all hick-

ory trees, perhaps one hundred feet high, or over, each tree producing a peculiar quality of nut, entirely different from any other tree. As children, we knew well which tree produced the better nut. Some of the nuts were of remarkable size, nearly two inches long, with thick shells; others were small and round, with thin shells and very meaty. These nuts possessed as much difference in appearance and flavor and size as the varieties of apples do at present. These trees were not accessible, owing to their immense height; hence, we could only secure the nuts after heavy winds. I remember going to the woods with my brothers and sisters, on a windy morning when the ground was completely covered with nuts; so thickly strewn were they we could scrape them up with our hands, into heaps, gathering bushels in a few hours. There was a hickory tree that grew in our garden that produced nuts with very thin shells. They were very meaty, and of delicious quality. This tree has since been destroyed. I often think what might have resulted had this variety been propagated and disseminated. It was far superior to any I have seen since. Our farm was not a chestnut farm, but chestnuts grew a mile or two distant. We made annual excursions to these chestnut trees, but without securing any large quantities. Butternuts were quite common on our farm and were stored away for winter's use; and there was one tree of the black walnut which bore occasionally large crops.

At a very early age I exhibited a taste for hunting and fishing. Nothing pleased me more than to rove through the fields and woods and along the rivers and brooks, with a gun or fishing rod. Wild pigeons in those days were very plentiful, also black and gray squirrels, and now and then a raccoon; while the creek abounded in muskrats.

## OLD TIME ORCHARDS.

In those early days there were few orchards of any account in a commercial sense. I remember one apple orchard, embracing twelve acres, which was the largest of any in our part of the country. This was originally planted with seedling trees. A few of them had been grafted to the Short Stem Harvest apple, Black Detroit, Swaar, Sweet Bough, and a few other kinds, but the great bulk of the orchard yielded nothing but cider apples. Surely it was a very poor method of occupying the soil, but the orchard is still standing. The orchard on my father's farm was similar, in fact. I am inclined to believe, that all the early orchards were composed of seedling trees, which were of no value except for making cider. Many of them were entirely barren of any kind of fruit. The ~~best~~ Sweet, the

Twenty Ounce, Gilly Flower, and the Short Stemmed Harvest apple, were the only additional varieties that I can think of, that were grown in those days. The Twenty Ounce was a remarkable apple then. I have not seen trees of late years, that produced such handsome specimens as those of that early date. The Sweet Bough and Golden Sweet also yielded beautiful specimens in great abundance. A tree of Sweet Bough was located in the center of our orchard and upon occasion would ripen its fruit before we were aware of it. I remember crossing the orchard when grain was growing in it, and suddenly discovering the ground completely covered with this golden fruit, in perfection, each specimen soft and delicious, without a sign of worm or other defect. Such a scene could be found with dif-



sculty at the present time. My father had made an attempt at fruit planting in previous years; hence, there were peaches, called sweetwaters that gave delightful crops annually. I do not remember any of the varieties grown now. The pears were viscous varieties that would pucker the mouth like a green persimmon. As a boy I never heard of the Bartlett nor of any improved variety, except the Virgaleau, so called. There were several trees of fine plums, but I did not know them by name. I doubt if they are varieties that are grown now; the Early Richmond cherry bore immense crops in those days and the fruit was far more perfect than of late years; it seemed to be larger. Sweet cherries were very rarely seen then. A neighbor by the name of Smith had twenty or more trees growing in his front yard, that were loaded every season. In those days there was no market for cherries or peaches or any other fruit, as there is at the present date; hence, this neighbor was not able to sell his cherries; therefore he welcomed his neighbors to come and gather the fruit, free of charge. This was something of a drawback to our neighbor Smith, as people came often ten or twelve miles to gather the cherries and usually remained to dinner with him; therefore, instead of deriving a revenue from his fruit he was at a loss on account of having it. His only recompense was the making of friends, providing those who gathered the beautiful fruit were thus grateful.

## THE SUGAR BUSH.

"Recollection is the only paradise from which we cannot be turned out."—*Richter*.

Another pastime of my boyish life was maple sugar making. My brothers did something at it before I was old enough, and from them I learned how to conduct primitive operations. Thus, when I was ten or twelve years of age I had my kettle boiling and with my horse was drawing sap in a barrel, enjoying the experience very much. I remember particularly the appetite I possessed as a maker of maple sugar. The dinners were eaten by the side of the open fire, and I assure you that almost anything would have relished on such occasions. While there is much hard work connected with sugar-making, there is much pleasure connected with it. I recommend it to all country boys, even though it be nothing more than a few trees in the fence corners. Our government now offers a bonus to every person who makes 500 pounds of maple sugar or more, of 2 cents per pound I believe. With this inducement every maple tree of suitable size should be tapped. If properly done the tree is not injured much if any. The outfit costs something, but it may be used for many years. Farmers have not worked this mine as well as they might.

There is money for the man who can make a superior grade of maple syrup or sugar. There is as much difference in the quality of

It is remarkable that there was no market for fruit at that time. I have known loads of beautiful peaches to be taken to Rochester without finding a purchaser. At that time people had not learned the use of fruit. It was not looked upon as a food or a necessity. They had not learned how to cook it or can it or evaporate it. Those who had an abundance, ate from the hand what they cared for and allowed the rest to decay. It may be doubted at the present time if we have learned how to make the best use of fruit, or the greatest use. Undoubtedly in years to come, we will discover new methods of consuming fruits in the way of non-alcoholic drinks, syrups, candied fruits and other methods unthought of at the present time.

While we find fault with the seasons of low prices, there is always a market for what we can grow, and we should consider the prices good so long as they are better than other farm crops will yield. Such seasons bring about good results in enticing people to consume fruit, who otherwise would not. Fruit eating is a habit, which when formed is not easily broken. People live longer than in old times. May it not be for the reason that they now consume more fruit? It seems to me that we are just approaching an era of fruit culture and fruit eating. It is the cheapest food that farmers can set before their laborers.

maple sugar as in butter. All depends on the utensils used, and on cleanliness and quickness of the process. Wooden pails and iron kettles give poor, dark grades of sugar. Tin pails, bright and clean, and porcelain lined kettles will give as much finer product as can be imagined. If maple sugar eaters could see all the dirt that gets into the sap, and all the soiled equipments that are often used, their appetites would be impaired. As a boy I have made syrup and sugar which would delight people who cared nothing for the ordinary product.

The first few days' flow of sap makes the best grade, and the last the poorest. Indeed, the season should close as soon as frosty nights are ended. Whatever we do we should aim to excel. This is the requirement of this age. Those who are satisfied to make ordinary grades of anything must take a back seat in the car of progress. This is one reason for the depression in farming; there are so many farmers who are satisfied with the ordinary. Farmers' butter has fallen into disrepute. It is excelled as a class by the dairy grades. The farmer is too much of a Jack of all trades, and master of none.

In fruit growing we must excel if we hope for the best success. It will not pay any one to grow an ordinary, or inferior grade of fruit. The rewards are for those who excel. This is just—no one can complain.



## FARMING IN OLD TIMES.

### CHAPTER II.

And when you crowd the old barn eaves,  
Then think what countless harvest sheaves  
Have passed within that scented door,  
To gladden eyes that are no more.

—Read.

My father's farm was one of the most fertile grain-growing farms in Monroe County, located about twelve miles south of Rochester, N. Y. It was elevated land, particularly suited to wheat growing. The location was attractive, commanding a fine view in all directions. This was the third farm that my father had occupied since his marriage and was considered the best in the county. It was the birthplace of my brothers, my sisters and myself.

It seemed to require no particular skill in those early days to secure a bountiful harvest of wheat or other farm crops. The soil was well supplied with humus, and the decaying roots of the forest trees which had been removed furnished drainage. The soil also had not become so compact as of recent years; it was more porous. Winds were not so prevalent, owing perhaps to the shelter of neighboring timber lands; therefore the soil did not dry up rapidly after rains. The brooks ran all the season; whereas, now they are entirely dry during the summer.

My father must have been a good business man, for he was successful in accumulating a competency. He gave his children educational advantages which were possessed by few at that time, when a liberal education was seldom thought of by farmers' boys. He employed a large number of hired men, as they were termed; and as I look back upon those employees I consider them men of more than ordinary ability. Most of them have since become successful and a number have accumulated large fortunes. I cannot help thinking this was somewhat due to the example of temperance, frugality, economy and right living of the employer; also to the good advice which he gave.

These men had great respect for my father, and seemed to have an interest in his success. They began work by sunrise in the morning and scarcely stopped when the sun went down; often doing the chore work in the twilight, which was not inconsiderable, as we usually kept from fifteen to twenty cows, a large number of swine, sheep, ten or twelve horses, etc. One of those hired men, an Irishman, was particularly zealous in his work, and was considered one of the most efficient; but he was very poor when he came to my father's place. Later on he became the owner not only of this homestead, but of a large farm adjoining, which my father subsequently purchased. This man is now worth fifty thousand dollars and is a prominent man in his community. His success was not attained without a struggle, as you may imagine. He had the capacity to do three men's work each day, himself, and the further capacity to get three men's work out of each man, each day, who worked with him. This gave him an advantage over his competitors. He developed into a good farmer, learning how to retain the fertility of his fields and still grow large crops.

The farm-house upon our homestead was built over a stone basement. It was one of the large, old fashioned rambling kind of farm-houses, poorly arranged in many respects. The front yard was small, almost entirely filled with shrubbery and flowers. In those days a lawn was seldom thought of. There were plenty of meadows and bright pastures, and it did not seem to be necessary to introduce such effects about the house, being so commonly met with elsewhere. It is only of late years that the lawn has assumed a conspicuous place about the home ground in this country. At the rear of the house was a fruit garden and at the front a vegetable garden. I do not remember any varieties of grapes grown on this place, of any value. There was one very large vine, probably the Isabella, but the fruit seldom ripened.





Scene in the Packing Yards of Green's Nursery Co., Rochester, N. Y.

### EVENTFUL DAYS ON THE OLD FARM.

The great events upon the farm were the seasons of harvesting, threshing, butchering, sugar-making, haying, washing and shearing sheep. These were looked forward to with considerable interest and anxiety. The cutting of grain was done with the hand cradle and men became so skillful with this implement as to be able to cut four acres per day, and he was a poor binder who could not follow closely in the wake of the cradler.

I remember the time when the first reaper came on to the farm. It was a cumbersome machine, with no tongue, intended to be attached to the front wheels of a lumber wagon over which the driver was seated. It required four horses to drag this heavy mass of iron and wood over the hills and through the valleys. The grain was raked off the platform directly in the path of the machine, therefore each bundle had to be removed before the machine could pass around again. The men who bound were stationed at regular distances around the field, each man having a certain stint to perform before the machine could pass again. This required active work, but the laborer often had intervals of rest, owing to the frequent breaking of this primitive reaper. It was not unusual for the har-

vesting to be abandoned for days at a time, until the machine could be taken to the nearest blacksmith or machine shop for important repairs.

The cutting of hay was also done entirely by hand, with the scythe. I remember seeing on bright July mornings, from six to a dozen men forming in line, cutting wide swathes across the fragrant meadows. Woe to the lazy or feeble man who could not keep out of the way of the man who followed him, for he would be in danger of having his legs cut and also of being the laughing stock of the whole foree. As may be supposed, the leader was a picked man. All were tired men when night came. This hay was spread by hand, often several times, the work of boys such as I. There were no machines for loading or unloading the hay. Everything was done in the most tedious and toilsome manner; and yet farming at that time was more profitable than at present.

While the machinery of the present day has lessened the cost of producing crops, it has lessened the profits to an equal extent. It has enabled men to manage large tracts of Western land, with a small amount of hand labor—one man now being able to conduct a farm of a thousand acres in the West with the same



number of men employed by my father on one hundred and fifty acres, in old times. Were the Western farmer compelled to bind his wheat by hand, in place of riding the self-binder, it would be impossible for him to bind hundreds or thousands of acres as is often done. It would be impossible for him to get the necessary help. It is the same with other improved machinery. While such machinery has worked to the benefit of mankind in general, it has not benefited the finances of the farmer.

We boys used to look forward with great anticipations to the time when the threshing machine was to come around. It was propelled by eight horses moving in a circle, attached to sweeps. It was a severe task for farm horses and a happy day for them when the farm steam engine was adopted.

The barns on our farm were immense; the bays extended far down below the barn floor, requiring marvelous exertion on the part of the men who pitched up the bundles to the

thresher. The stacks of straw were of great size and the granaries were always filled to the utmost capacity with the golden grain.

Pork was a profitable source of revenue for the farmer in early days; therefore, my father always fattened a large number of swine. I remember distinctly the importance of the days of butchering. There was very little sleep indulged in the night before, by any of the men. They were aroused at three or four o'clock in the morning to light the fires for scalding. The day's work was a severe one, usually done in cold weather. How different now the butchering in the large slaughter houses of the country, notably Chicago, where perhaps 100 swine could be slaughtered, dressed and cut up with as little expenditure of human strength as was required to slaughter one hog in olden times. Even the waste of the old time farm butchering would yield a profit to the Chicago slaughter house in the present day, sufficient to make a fortune for the monopolist.

## FORMS OF CHEAP LABOR.

My father and mother were people of thrift, designing to economize in every way possible, therefore they were continually adopting boys or girls to take the place of servants somewhat, but were allowed privileges as one of the family, and were given an education, were well clothed and given an opportunity to improve in many ways. I cannot help believing that my parents desired to do some good to these adopted children, as well as to be benefited somewhat themselves by this form of cheap labor. But as I look back upon their experience, I am not encouraged to follow that line myself. The peculiarities and eccentricities encountered at birth by these waifs were somewhat startling. Some of them proved to be theivish; others were bad in different ways more or less alarming. A few proved to be all that could be expected. I remember particularly one boy whom my father secured from the House of Refuge at Rochester, intending to make a man of him, and, indeed, we all thought he might in time take his seat in Congress; but after a few weeks stay, he took his departure one morning at a very early hour, before any of the family were awake, and in his haste took with him the best suit of clothes the writer possessed. Neither boy nor clothes were heard of again. One boy was called "Little Bill," from the fact that he was smaller than another called

"Big Bill." This boy was a fine singer and very bright and capable. I remember a girl that my mother adopted, who though not lacking in virtue, brightness and ability, possessed peculiarities of manners that did not make her particularly helpful. She would, however, outshine all members of the family, or any one in the community, in entertaining guests that might arrive in the absence of members of the family, or at other times, when she would be mistaken for the lady of the house or some more important personage. To enumerate the tricks and grievances committed by this class of help would require a book of considerable size. I do not recommend cheap help. In my experience it is the most expensive.

The numerous barns on our old farm were the nesting places of hundred of doves or pigeons. These birds were an attraction to our old farm, when feeding about the place, promenading on the roofs, or circling the farm in graceful flight. These birds consumed nothing of value to the farmer; they gathered up the waste grain in the fields, and that which was scattered about the barns, and maintained themselves without expense. They are good eating, particularly young birds, and a source of delight to all children, especially if made pets at an early age, when they become quite attractive.

## RURAL LUXURIES.

My father always kept good horses. I remember particularly a pair of blacks which were used especially for road horses. He also had a number of carriages and took

great pleasure in driving to church twice a day every Sunday. In fact, this pair of black horses became well known for a great distance around the country.

We also had a piano in the house, which was one of the first in the neighborhood. My father seemed to possess generous views of life and desired not only the comfort of himself and wife, but also of his children and friends. But one incident I can remember where he was not thoughtful. This was in preparing for a ride to the city on a cold day, a distance of twelve miles. We often went in a democrat or spring wagon, without cover, carrying the butter or eggs, and other products, to market, and if we had a warm robe in front of us he paid little heed to the cold wind that swept in under the seat, and sailed off towards the city as though in the most comfortable manner possible. Now it was simply monstrous for women to ride twelve miles on a cold day thus exposed to biting winds. It was just as necessary to have a warm robe on the seat and under it as it was to have it in front and over us. Again, how easy it would have been to have placed a lantern at our feet, or something of that kind, to keep up the temperature. Often I have arrived at the city more dead than alive with cold, but my father and the older male members seemed to be so hardened to the low temperature that they did not suffer from it.

Sunday on the farm was to me as a boy, a dismal day. My father being a church man was always in attendance with his family, but I confess I did not enjoy going to church as a boy, although I do as a man. I did not fancy being attired in the Sunday clothes that farmers' boys wore in those days. My collars and shirts never fitted, and my other garments were too short or too loose; at any rate I felt very uncomfortable and not appreciating the sermons I generally managed to be out of sight when the carriage drove off for church service; then, how to pass the day was a difficult problem. To hunt or to fish would have been a crime that could not be thought of for a moment. Even to

club apples off from a tree would be considered sinful enough.

The neighborhood of our old homestead was good; better in those days than at present. There was a better class of people occupying the farms in Monroe County in early days than now, so far as I am able to judge—more of a church-going class of people. In these days the cities seem to absorb many of the best class from the country. The cities are made up of bright men who have gone there from the country. This cannot but be a loss to the farming community. People were very neighborly in old times, visiting often, one with another; far more so than at present. They joined with one another in helping through important work; in threshing they “changed hands,” as they called it; also in butchering. Since good neighbors add very much to the enjoyment of life, either in the country or city, we should make the most of such as we have. If we complain of our neighbors we censure ourselves, for our neighbors are such as we make them, very often. If we are a good neighbor, we are apt to have good neighbors. What is more sad than to see two neighbors quarreling? What is pleasanter than to see neighbors sharing their joys and their sorrows, giving to each other a helping hand, sympathizing in hours of trouble?

About seven miles from our farm was a celebrated school, a seminary and college. These schools did a noble work for all the country around. Very many of the prominent men and women now occupying positions of eminence, in the pulpit, at the bar, as doctors and scientific men and women, were educated at this place. Here my brothers and sisters and myself turned our footsteps after leaving the old cobble-stone schoolhouse at the foot of the hill near our farm. My father had helped to endow these schools, as had many other farmers in the surrounding country.

## NATURALLY INCLINED TO FRUIT CULTURE.

Early in life I felt an inclination to fruit culture. This was indicated by my love for gathering wild fruits. I had a perfect passion for it. Nothing delighted me more than to tramp through the fields and woods, along the brooks and creeks for many miles in all directions, after wild raspberries, strawberries and blackberries. Indeed, I had roved around so much I knew the location of almost every berry bush within three or four miles of our house. It was not alone for the value of the fruit that I made so many wearisome marches, often went without my dinner. It was the particular attrac-

tion that such things offered me. I became very enthusiastic over special varieties of wild fruits that I discovered in my tramps. I did not suppose then that these were different varieties. I do not think that any one dreamed at that time that there were different varieties of raspberries or blackberries. I supposed that the increased size and productiveness of certain bushes, was owing to the favorable location of those bushes near springs where abundant moisture was furnished, or to the very rich ground; but I am convinced now that these were choice varieties that might have



been propagated with great success. But people had not then advanced far enough to appreciate the value of such things.

It seems to me that parents should consider wisely the inclinations of their children. The great mistakes of life are owing to young people adopting professions or going into business for which they have no natural ability. It is easy to see that if young men could start out in early life in the pursuit for which nature has best adapted them, and if they should persist in that line industriously and energetically, success would be assured in every instance, no matter if they were not possessed with brilliancy or unusual ability; persistence in this one line will bring success. But in most cases when the young man or young woman starts out in life, they are at a loss to know what to undertake, and the consideration of what they are best intended for by nature is the last thing which they consider.

They are apt to be guided by circumstances, choosing the undertaking or enterprise that offers itself most conveniently, or are governed by considerations of gentility, selecting something that is genteel, or so considered, or selecting enterprises or professions that seem to offer the greatest reward for the least effort, or that give the most promise of social position. How many third class ministers and lawyers there are who might have made remarkable success in agriculture or horticulture, or even as inventors, railway men or mechanics. In my own case, I was not encouraged in following the bent of my life toward fruit culture. Fruit culture then was not known as a business. My father knew little about it and considered it a venturesome undertaking. I am confident now, that had I undertaken fruit culture at that time as I desired and as I planned, my success would have been secured with less struggle.

### A VISION NOT REALIZED.

When I was a boy the Concord grape had just begun to attract attention as a promising new fruit, vines selling at \$2 or more each. After the vines began to sell at lower prices I proposed to plant a vineyard of that variety. As I look back on those boyish plans, the site of the vineyard, etc., I conclude that the plans were well laid, and should have proved successful. But many who planted in those days make great mistakes in selecting varieties, not knowing which were desirable, as there were no fruiting vineyards, and we could not judge from the experience of others. Thus many planted Diana, Isabella, Catawba, and other varieties that ripened too late for our locality. Planting vineyards now is a 'simple and certain enterprise.' The pioneers have taught us what is safe to plant. We can be benefited by their experience, their losses, their misfor-

tunes. There is now no risk in planting a vineyard of Concord, Worden, or Niagara, if we will select a suitable site, and attend to the vines as we should.

I recall the enthusiasm that burned with perpetual fires as I contemplated this early vineyard which was doomed to exist only in my brain. Already the vines had fruited in my imagination and perfumed the air with purple clusters. How plainly I could see the long rows of vines, now sinking in the valley, now rising over the hill top, then disappearing against the shadows of the woodland. Who can paint youthful enthusiasm when excited with congenial schemes? No one. The pictures that exist in the dreams of youth must remain unpainted, and the story untold to ears of mortals.





## MY FIRST APPLE ORCHARD.

### CHAPTER III.

Blessings may appear under shape of pains, losses, and disappointments, but have patience, and you will see them in their proper figure

—Addison.

My father had been enlarging his acreage by the purchase of a beautiful farm adjoining the old homestead. He moved to this farm, which was equipped with more modern buildings than the former and somewhat nearer town. He subsequently sold the old homestead to one of his employes, as before intimated. The sale of the homestead at that particular time was a misfortune financially, for it was when the current money was depreciated, and before many had realized what depreciation meant. Therefore he sold the farm at prices that prevailed when gold was no more valuable than paper money. In this manner very many people like my father met with serious losses.

On the new farm was a field located in such a peculiar manner as to make it almost impossible to harvest grain crops: it was all hill-top or side hill. The soil was fertile but somewhat clayey, underlaid with hardpan in certain portions. Owing to the disadvantages of this field, I asked my father to permit me to plant

it to apple trees. I did not then know that an elevated site was more desirable for fruit growing than low ground. My sole object was to make the best use of this ungainly field.

We had considerable trouble deciding which varieties to plant, but finally selected Baldwin, Greening, King, Spy, Roxbury Russet, and a few harvest and fall apples. We prepared the field by planting a hoed crop the year previous to setting out the trees. The field was thoroughly plowed and cultivated the spring before planting. We had difficulty in staking the field, to get the trees in line every way. As much time was spent in locating each tree as in planting. This can be avoided by marking out the entire field as though planting corn, with an ordinary corn marker. In this manner, every tenth row, or every ninth, as you may desire, can be planted to a tree, and the rows will form lines in every direction. After this, if it is desired to plant the field to corn, potatoes or beans, the field is already marked. This is the simplest and best manner of marking a field for planting the grape, apple, pear, quince, raspberry, strawberry or other fruits.

In planting the southerly side-hill, where the ground was most clayey, and



Shady Avenue, Rows of Maples Planted by the Author when a Boy



the hardpan most tenacious, it required a crow-bar to make the holes of sufficient size, and several hours were spent in planting one tree. However, we filled the excavations over the roots with friable soil brought from a distance, yet had many misgivings about the success of those trees, owing to the supposed unfavorable character of the soil. I remember one tree that was located between the forks of an old oak stump. I had doubt about this tree being a success. In after years I visited this orchard

with considerable interest, to discover how my efforts had succeeded. I found that the trees planted on the hard side-hill had not made quite the growth that others had made in a more friable soil, but these trees on the hard land had been even more fruitful than those on better soil, and the fruit has been of a superior quality. It is evident that the soil, although uninviting in appearance, contained considerable fertility, yet did not encourage excessive growth, thus fruit buds were formed early.

### MY FIRST FRUIT GARDEN.

The entire farm was somewhat gravelly, with the exception of an acre of sandy loam in a valley far back from the house, which I devoted to a fruit and vegetable garden. Through the center of it I planted a long row of blackberry bushes gathered from the fence corners. In my ignorance as to what method to pursue, I built a frame or fence boards on either side of this row, about three feet wide, with a view of holding the branches up from the ground. This was a needless expenditure and worse than needless, as it prevented cultivation with a horse. Raspberry bushes do not require such supports if properly cut back during winter or early spring, in which condition they form hedge-like rows, self supporting. However, the plants never bore any fruit. They were largely old ones, and such cannot be advised of the raspberry, especially, for transplanting.

I desired to plant strawberries in this garden but had great difficulty in securing plants. I at last found a few and by increasing the young plants, finally had a large bed, but no fruit. Year after year I watched them with great expectations, only to meet with failure. These beds were at last plowed under and further search made for better varieties as I was not at all discouraged by my failures. I remember finding, a long distance from home, a variety called the Golden Queen, if I remember correctly. I saw the berries on the vines of the owner and they seemed to be very large and attractive, though soft. I paid a large price for a few plants but cannot remember that they ever gave me very much fruit. Finally I secured plants that I assume were the Wilson; possibly I am mistaken about this. These rapidly increased and I soon had several rows across the garden; but these also failed to bear fruit. I remember one season that I secured a handful of berries, only, from the entire patch. I was puzzled to know why I had failed so often, and did not discover, until years afterward, that it was owing to the late spring frosts

which fell with great severity on this low land. In some of the early plantings, doubtless the varieties were not bisexual, and failure may have been owing to that cause. But one season the late frosts did not destroy the blossoms, and the vines were loaded with very large and handsome berries, to my great delight—and surprise I may say, as I had almost abandoned hope of success.

I had no boxes or crates in which to place these berries to carry them to market, therefore picked them in tin pans such as my mother used for her dairy, and in these tin pans I carried them to the university town to which I have previously alluded. It was the season of commencement at the college. Great numbers were congregated at the village. I had had no experience in selling fruit and hardly knew what to ask for those berries or where to sell them. I remember driving my horse up in front of a small hotel, which was crowded from basement to attic with people vainly endeavoring to get something to eat. After much difficulty I secured an interview with the proprietor, who, on learning what I had to sell, left his guests and other engagements without ceremony, giving me his undivided attention with great promptness. On learning my price (ten cents per quart) he did not hesitate for a moment but contracted for the entire cargo, which could not have been over one or two bushels. Doubtless, I might have secured twice the price, had I experience or had I known the great scarcity of fruit of all kinds. As may be imagined, I was a proud boy, as I jumped into my wagon homeward bound with the hard silver jingling in my pocket: the first money ever received for fruits of my own growing.

Had I continued in fruit growing at that time, in a general way, or in growing strawberries alone, I could, undoubtedly, have made it immensely profitable, as there was no competition to speak of. But at that time one of my elder brothers had engaged in business in



a town at a distant point in the State and I was induced, in one way or another, to learn something of business by engaging as a clerk with him. Therefore, at the age of sixteen I took a seat in a banking office about one hundred miles from our farm, and occupied my time in straightening out bank bills, looking over checks, counting gold, silver and bank notes, running on errands or in other ways which might be profitable to my employers or to myself.

This was one of the old State banks which issued currency secured by farm mortgages or otherwise. In order to show how indulgent my father was towards his children, I will say that he mortgaged his farm, which was previously free of incumbrance, in order to help start this bank which my brother had organized yet he met with no loss in this instance. If my father had a fault, it was in being over-

helpful to his children in starting them in business. I think in this he was going farther than prudence would suggest, risking much in order to start his boy.

My experience in this distant town, which was a very lively place of considerable size, was enjoyable and of considerable benefit to me. I had not mixed with society up to that time and found the change very acceptable. After remaining at this place a comparatively short time, I returned to the farm.

Then followed war times. I can remember where I stood when I heard the first news that war had been begun. I remember also where I stood when the news came of Lincoln's death, showing that these events made a strong impression on my mind. I was then 18 years old. My brother, being a captain stationed at Washington, D. C., I acted as his clerk there for a season.

### MY FIRST VENTURE AT FARMING.

My father, ever willing to give his boy a chance to improve his condition, offered to lease me the farm, which offer was accepted. I cannot help thinking that the conditions were very favorable to myself. This, in connection with the fact that prices during the war were remarkably high for all kinds of farm produce, enabled me to make a clear profit of one thousand dollars each year for the two years that I managed this farm.

I remember getting together what seemed to me a large herd of beef cattle, buying one or more at a time in the locality. Late one afternoon a drover chanced to be that way and desired to see this herd of cattle. When we reached the pasture where they were confined we found them at a considerable distance from the house, near the shadows of a large piece of timber. I remarked to myself that the cattle were looking remarkably large and plump after the day's feeding.

The drover made me an offer for the entire lot, which I accepted. I afterwards learned that he lost considerable money by this purchase; and I have been told since by practical men, that stock at the hour of dusk, when they cast shadows upon the ground, look much larger and plumper than at any other hour of the day, and that such is not a good hour to buy such stock. The sum paid to me seemed to be very large—about seven hundred and fifty dollars; certainly the largest sum I had ever received from any one business transaction. All of this was placed in the bank at one deposit, and proved to be a very profitable piece of business.

I look back upon this farming enterprise with much pleasure. My experience was not unpleasant altogether. I was stimulated with the prospect of large profits. There was no risk incurred worth speaking of, yet I was not

satisfied to remain on the farm. I ask myself as I look back upon this experience, what induced me to leave the farm? Why was I not satisfied to remain under such favorable circumstances? Surely if anyone could be induced to remain on the farm, why not I?

My brother at this date had sold his interest in the distant town and removed to a nearer city of much larger size. Occasionally he would drive out to the farm to visit us. Often he would turn his horse and elegant carriage in by the road side, himself and family elegantly dressed, while I would dismount from my reaper to greet him, my hands soiled with the black oil from the machinery, my face sweaty and dusty, my form clad in clothes more or less dilapidated. I do not doubt that I saw a remarkable contrast between my appearance and that of my brother and his family on such occasions. These things, though small, make an impression upon boys. We all like to look well and to appear to good advantage. Farmers' boys often appear at disadvantage with their old clothes, heavy boots and slouch hats. Who can appear easy and graceful when wearing poor apparel? How easy it is to be at ease when well dressed. It has been remarked that no class of ruralists dress so poorly as those of this country. Even the peasantry of France excel us in the simplicity and neatness of their dress. I see no reason why farmers should look so poorly dressed as they do.

We cultivated large fields of corn. I worked in the field daily with my men, and no one expected to do more work than I. But husking corn daily for six weeks was somewhat monotonous. If I can judge of one thing more than another that led me to discontinue farming, it was monotony. Nothing is more tiresome to a human being than monotony. Those who live on farms should make every effort to



provide relief from this curse, more prevalent in the rural districts than in any other place, except a coal mine. One method of relief may be to encourage a member of the family to grow fruits. Fruit growing is not so monotonous as farming; it leads a man more into the world; he moves about, sees more people and greater variety of scenes. He has greater opportunity for developing his business faculties; he has to investigate more, read more, travel more. I know of no better way to break up the monotony of farm life than this. I remember particularly waking up every morning on the farm greeted with the quacking of a large flock of ducks. This became especially distressing, the most monotonous and tiresome of all my recollections of farm life.

Another item worthy of mention was the lack of change in bill of fare at table. There is great monotony in this line with most farmers. There is no economy in sameness of eatables. It would be just as economical to have a variety of meats as to have so much of one kind as most farmers consume.

Another drawback was the horrible roads that prevailed at that time, and which continue at present. These roads virtually cut off the farm from all communication with the outside world at certain seasons of the year. Such roads are the curse of the farming community. Farmers do themselves great injustice in permitting bad roads to continue. Were the roads good, men of wealth would take up their residences in the country; farms would be more salable at better prices.

But further than all these objections to farm life was the spirit of enterprise of which all American boys partake. This spirit does not always seem to be entirely satisfied with farm life. Boys see people and hear of more who are doing remarkable things in cities. They look about them to discover opportunities. They feel a longing for a tussle with the world. This feeling was undoubtedly the leading cause of my leaving the farm. As Rabbi Solomon Schindler says in the *Arena*: "There are three causes which bring about changes in location. The first is the restlessness of some minds. Inasmuch as nature demands that the masses of humanity be kept in constant motion, and never allows them to fall into a state of torpidity, she infuses individuals and generally the most vigorous and active specimens of the genus, with an adventurous spirit over which they have no control. Offer to them whatever inducements you please—wealth, honor, a pleasant home—they will not yield to them, but rather struggle against the hardship which the building up of a new domicile in a foreign land implies. It is exactly this hardship which attracts them; they dislike nothing more than the monotony of a well regulated life, and consider themselves well repaid for their troubles by the charms which ever changing enterprises offer them. A second cause for emigration is the attraction which another occupation holds out to the comer. It is the outcome of the law of demand and supply."

## SHOULD BOYS STICK TO THE FARM?

The question arises here: Should the farmer's boy stick to the farm? I think not in all cases. It is not best for the young man to continue at anything that he is not fitted for, and if a boy feels dissatisfied with farm life, continually thirsting for something different, it is well perhaps to allow him to follow his natural tendency. We are not all intended by nature for one line of work. This is a wise provision, otherwise farming would be more largely overdone than at present. Some of us were intended for lawyers, others for physicians, ministers, mechanics, inventors. It would be folly to try to make a farmer out of one who is far better calculated for some other enterprise.

Would it have been better for me to have remained on the farm? I cannot feel sure that it would. I am inclined to the belief that everything that is, is for the best, and I accept the lot that providence, destiny, good fortune or whatever shaped my course, has led me into, feeling that it is for the best. But no, I do not believe in destiny or good fortune. Any man who blames destiny should blame

himself. Good fortune simply means good opportunities that come to every man if he has the sagacity to see and accept that which is offered. Providence rules, but not to the advantage of the lazy and inefficient. Every man must be the architect of his success. If he has the right metal in him he can not be kept down. If he is made of poor metal he cannot be kept up, though all the world try to elevate him.

Had I remained on the farm I might not have done so well; possibly I might have done better. Certainly I have developed faculties that I would not have developed had I remained. It is desirable to be placed where we can develop faculties, and I am not prepared to say that an ordinary farm, as ordinarily managed, is a good place for such development.

After the two years of successful farming, I was offered a position in the city as clerk in a bank, which I accepted. My father, seeing the prospects were that I had given up country life, sold the remaining farm and removed also to the city with other members of the family.



## A COUNTRY BOY'S EXPERIENCE IN THE CITY.

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### CHAPTER IV.

I did not leave the farm without feelings of sadness. Here was my birthplace. Here I spent my childhood and early manhood. Under the shadows of those trees many problems of life had unfolded. Youth is a life itself, compared with which all the remaining years are prosy. Youth is a slowly unfolding dream, while mature age is practical, calculating, often harsh and repulsive. One must ever have fond memories of the spot where he has spent his childhood. But my hopes for the future were bright, therefore with a sigh for the old scenes I hastened on to greet the new. It is well that youth is impulsive and imaginative; were it not thus every enterprise would languish.

As I left the farm for the city in the stage coach, I found among the passengers a farmer neighbor. He advised me to have the courage on all occasions to do right and refuse to accept the social drink. I have often thought of this good advice. I recently met this man and thanked him for his kindness. A word of advice on such an occasion is not easily forgotten, and the result may not be easily measured. I wish here to give the same advice to all starting out as I then started.

There is a continuous tide from the country to the city. Parents who have laid by a moderate competency go to the city to educate their children, and to learn something of different phases of life. Young girls go to the city to pursue studies in music or stenography, or to take up dressmaking or millinery. Young men adopt city life in order to secure a better education, or to begin business for themselves, or as employees, with vague ideas as to results, but with bright hopes that all will in some way end well. The cities are rapidly growing, while the small towns and the farming districts are becoming less populous.

My experience teaches that in some cases people better their prospects by changing from

country to city life. I know of farmers who have come into Rochester, N. Y., and have added to their capital, and led a contented life; of country girls who make double the money here that they could have made in the country; of young men who have become wealthy and distinguished here.

On the other hand I have known farmers to lose everything in trying their hand at such new ventures as the city affords; girls who were glad to get back to farm life after severe trials; young men broken down physically, financially and morally, who might have succeeded if they had remained on the farm.

Everything depends on ability, adaptability, opportunity and natural inclinations. Each must decide for himself whether it is best to remain in the country or go to the city. Changes are usually best avoided. Move seldom if at all. If there are serious doubts, better stay on the farm. Where one is able to make an experiment with city life, desiring to secure there culture and training, and yet return to the country without inconvenience, much good may result, for the city possesses advantages in these lines not possessed by the country.

Many kinds of city business can be conducted successfully in the country, if we have the necessary business training, and with less expense.

I have in mind a boy of eighteen years, who has recently come to the city from the farm. He is delicate, and ill fitted for farming. His tastes do not tend that way. His people are poor and can give him but little assistance. He is bright, honest, industrious, ambitious. I can see that if it is boy will be satisfied to begin at the bottom and work his way up patiently, there is ample opportunity for success in almost any line of city endeavor. Such young men, when they have had experience, are in demand. The start is always made slowly, but merit is usually appreciated and rewarded in the city.





Charles A. Green's Present Home at Rochester, N. Y.

### BEHIND A BANK COUNTER.

After a short apprenticeship, I found myself, at the age of twenty-three a cashier in a bank, which position I held for ten years. Such positions are not so easily secured now as then, and my rapid promotion was partially owing to the fact that my brother was one of the proprietors of the bank. Many young men now would think themselves doing well if they secured such a position after many years of apprenticeship, and even then such positions are usually governed by friends of influence. The hours of work in my new position were few, and the duties not objectionable, yet I was often more weary than I had ever been when following the plough, or riding the reaper. I made many acquaintances, but had no boon companions. I connected myself with a church, attending it regularly. I kept a speedy young horse, raised by myself in the country, and improved my health by frequent rides morning and evening—rational was it not?

Those were the days of oil well investments. Everybody seemed to be crazy over oil speculation, the most staid business men, and many professional men, even clergymen, venturing large sums of money in oil stocks, in new oil territory, new wells, equipments, etc. My friends and relatives were officers in these oil

companies and invited me to invest my capital that way, but I was not venturesome enough to risk my money in holes driven at random into the bowels of the earth, hoping to strike a fortune at the other end. In fact I was not inclined to be speculative. I invested in county bonds, what little I had to invest, and in buying and selling these turned an honest penny if not a rapid one.

As the years rolled by I was offered the opportunity to join, as junior partner, a firm of bankers, which I accepted, not because I saw therein a remarkable opportunity for making money, but for the reason that it seemed to open the way to a desired object that I will not now mention. Indeed the ultimate success of this firm was questionable in my mind, for the reason that none of its members possessed large capital, and banking, to be successful, requires an abundance of money.

I soon discovered that my new position made me a person of more importance than formerly. Indeed I was elevated beyond my deserts. I was no better than when I was a clerk, and yet I received attentions that no clerk would be favored with. But how shallow, how insincere, how short-lived are friendships thus founded!

## WEDDING BELLS.

I remember being invited to a large evening party soon after I became a full-fledged banker. I was somewhat diffident, and my heart beat rapidly as I made my appearance in the elegant parlors of the host, who was a depositor at our bank. I soon became at ease, however, finding a few among the guests whom I had met before. Imagine my astonishment when my host took my arm and marched me around the rooms, introducing me as Mr. — the banker. Ah, what magic was in that name—banker. Had I been announced as the baker, the grocer, the farmer, all occupations equally honorable and noble, I would not have received so many flattering words and smiles. Without seeking or desiring, I was made quite a lion. Banker? Why, a banker must be a man with money—or at least with influence. Hence everyone smiles and fawns upon the banker. Everyone knows the banker. He is a man of importance. Should the banker be a man of moral integrity, all is well. Should he be of irregular morality, no great fault is found with him so long as his credit is kept good. The word banker opens many doors that would remain closed to the grocer and farmer, but it is not the man himself who is thus honored, it is his supposed wealth. In my case wealth was mainly imaginary.

"Money makes the mare go," now as in old days. American people have no aristocracy but that of wealth, therefore they must make the most of such as they have.

Now about getting married. A very proper question for a young bachelor who longed for a home of his own, and who was exceedingly domestic in his tastes. Surely it ought to be easy enough for a young banker, six feet one in his stockings, and not absolutely bad looking, to find a wife. But it was not so easy. I hunted high and low, and yet remained a bachelor.

My brothers had all married for love regardless of money. Said I to myself, why not you marry a girl with some wealth. Her money will be no detriment to happiness if you truly love her. So I firmly believed that I might marry a rich girl, and yet I would not do so unless I thought more of her than of all others. Alas, what a mistake. Why should I not have known that love does not go out to real estate or gold coin. I knew dozens of superior young ladies—noble, true, talented, cultured young ladies, ladies of wealth, ladies with no wealth but virtue and loveliness, and yet I had not found a wife. I abandoned the hope of marrying for both love and money. I deliberately came to the conclusion that between the two evils, highway robbery was preferable as a means of raising money to marrying it.

Thus I moved about disconsolately. Every other fellow went to church or concert with his sweetheart—none had I. But destiny was coming, and at last I met my Moscow. I fell

in love as the forest tree falls in the tempest. Not that I had never been in love before. No, but this seemed a hopeful yet desperate expedition. My whole soul was wrapped up in it, and yet it came to naught but heart-ache. How humiliating to write these words—she married another. How dark the night when I, an invited guest at her wedding, drove past the brilliantly lighted house, and out, out, into the darkest retreat of the river ravines to hide my sorrow. To-morrow she would sail for Europe, mated to a rival. Alas, what a dark world this is when our brightest hopes are blasted. Laugh if you will at such boyish grief, you hardened philosophers. Yes, there may be as good fish in the sea as ever were caught, but you cannot thus console a lover. His sorrows are real—he deserves sympathy that none can give. For him there is but one woman. All others are as though they did not exist.

If you, kind reader, are passing through similar experiences, I counsel you to cheer up.

I cheered up. The next day I was on a boat with six days' sailing before me on a tour through the great Northern lakes. A few weeks of fishing and hunting worked wonders in teaching me to forget.

Not long afterwards I met the girl who is now my wife. I am not going to tell about my courtship. Enough to relate that I am happily married and have a happy home blessed with loving children.

I have forgotten to state that I attended the school for deportment and dancing, of Mr. A. M. Cobleigh the first year of my residence in the city. Mr. Cobleigh had been an Episcopal clergyman, was a man of high moral tone, and his school was attended by the elite. During the first few weeks here the boys were trained on different nights from the girls. Boys were taught to march backward and forward, to bow, to salute, and to perform many military evolutions, all designed for removing the awkwardness and stiffness of youth, and to give grace of movement instead. This was good training for such a green country boy as I. Later the boys and girls were trained together, and taught different dances. Occasionally a grand affair was given to which the public was invited. Full dress was the proper thing on such occasions. I desire to state that I carried my dancing no farther than this school.

I enjoyed it at the time, and still think it was a good investment of time and money, but I have not attended dancing parties since, and have no tastes that way.

I remember having had my voice trained in singing by one Professor Black, a high-toned musician, to whom I paid \$1.50 per hour for so directing my vocal organs, that I could alarm the fire department blocks away. After having paid the professor considerable of my



hard earned money I was invited to exhibit my voice in song by a young lady of whom I thought particularly well. I thought she laughed during my singing more than the nature of my song demanded. This and

other incidents cooled my ardor for becoming a vocalist and I devoted myself thereafter more closely to practical affairs for which I concluded I was better adapted.

### ORGANIZING A SAVINGS BANK.

At the date of which I am writing the east side of the river at Rochester, N. Y., was of little consequence, commercially, as compared with the west side, and yet, population on the east side was the larger, and rapidly increasing. The banking facilities on the east side being inadequate, it occurred to me that it would be well to have a savings bank on the east side. I mentioned the matter to several business men, and all agreed that the east side should have a savings bank, and all seemed willing to aid the undertaking. In order to organize such a bank then, a charter granted by a special act of the State Legislature was necessary. I employed the Hon. John M. Davy, (since a member of Congress, and now a judge of the Supreme Court) to prepare a bill, with the names attached of prominent men whom I had solicited to act as trustees,

among which were James Vick, Gen. I. F. Quinby, Edwin Ocumpaugh, Judge Warner, H. S. Hebbard, and many others. After much delay and many petitions to members of the Legislature the bill authorizing the establishment of the bank was passed.

I immediately called a meeting of the trustees for the purpose of electing officers and opening business, and even went so far as to suggest the name of the man for president, who was subsequently elected first president. Mr. Bromly, then proprietor of the Osborn House.

This bank, named by me the East Side Savings Bank, is now the most prosperous one in the State, having a large surplus, and doing a large and successful business, under the management of President Filon, Secretary Veilie, and the board of trustees.



EAST SIDE SAVINGS BANK, ROCHESTER, N. Y., ORGANIZED BY THE AUTHOR.

## A PROFITABLE INVESTMENT.

While it is not my intention to mention all the enterprises in which I engaged during my sojourn in the city, I will mention one other. A man by the name of Arnold had, twenty years previously laid out a park off East Avenue called Arnold Park. He had planted an avenue of maples and evergreens, with circular drives, hedges, flowering shrubs, etc. But alas, he could not sell the lots. He lost his money, and the bright fancy of his brain grew up to grass, moss, shadows, and mosquitoes. It was forgotten. People who passed that way inquired what was there. Few could reply, but now and then a man would say, that was "Arnold's folly." But it was not bad folly after all. Some one rurally inclined, pushed his way into the then tangled thicket of after years, and found order in the apparent wild growth of tree and shrub. A few rash men built cottages therein.

When I arrived upon the scene, looking for a chance to make money, the park had been opened up and improved to a point where a circular driving occurred. Here a rough fence was thrown across the path, and no further progress could be made by man or beast. Looking over this fence I could see a deep excavation partly filled with boulders, stumps, dead brush, and ruins of various kinds, and beyond, confusion and more brush and entanglement.

I found this closed end of the park covered nearly four acres. It was for sale, but the man who owned it was such a hard man to deal with, all had given up the thought of purchasing.

But I saw great things in this piece of ground. Here was a case where my imagination was worth money. As a boy I was poetic and fanciful and used to be bothering my friends with samples of my rhyme. Now my fanciful nature was to turn to profit. In my imagination, I could see in this dirty slovenly hole and brush pile, beautiful paths and drives, and people eager to buy homes in such a beautiful spot. So I "went gunning" for the owner of the land, and finally purchased all his right title and interest. It was a lucky day for me.

I burned the brush, cleared up the surplus undergrowth, cut out excessive shade, opened up driveways, graded, planted, planned and built, and reaped quite a little fortune out of the venture. The park is now one of the most attractive resident parks in the city of Rochester.

I hope to show in my next a view of my former beautiful home in this park.

On September 3d, 1873, I visited New York (my wedding journey) and while there the greatest and darkest panic that ever made this country tremble and groan began with the failure of Jay Cooke & Co. From that hour what little capital I had made on the farm and since, also all that my father had accumulated by a life time of toil and saving was doomed.

A short time after this I was inquiring "what can an honest man with willing hands find to do to secure a living." I had lost everything, but I was not discouraged. I felt that I would succeed—that I must succeed, for the responsibilities resting upon me were something awful to contemplate. If I had only my wife and myself to provide for the question would have been less difficult.

I first applied to a friend for a position as salesman in his dry goods store. "My dear sir, you would not be a success behind a dry goods counter," he replied. This was startling. Being about as full of conceit as most young men I supposed if I could do nothing else I could measure off calicoes with a yard stick, but here I am told that I am not competent. But possibly my friend was complimentary after all. Not every one is fitted to stand behind a store counter. Evidently I was not cut out for such work. I never sought another position in that line. I was however offered opportunities by friends and acquaintances, by which I could have remained in the city, but having for years hungered for a return to farm life, I turned my steps joyfully that way. I was still a practical farmer. Farming was safe and sure, if slow. On the farm my family could live at small expense. I loved the country. As results proved I made a wise choice.



## IN SEARCH OF A NEW FARM HOME.

### CHAPTER V.

During my residence in the city my thoughts often returned to my boyish experience in farm life. I thought it would be a fine thing to buy a dilapidated, run down, neglected farm and restore it to its original beauty and productiveness. This was a fanciful idea which was born of my early experience and induced partially by my forgetfulness of the many unpleasant details of farm work in early days. A traveler years after returning from a long journey remembers only the pleasant part of his experience. The struggles through mountain passes and scorching plains, the hunger or thirst, are forgotten. Thus I had forgotten the hardships of farm life, and it seemed as if it would be a very pleasant thing to return even under the unfavorable circumstances mentioned.

For several years after the panic of 1873, farms in Monroe county were offered freely in exchange for almost any kind of property. These farms were heavily encumbered, the owners carrying the indebtedness as long as it was possible for them to pay the interest. Finding at last the burden too heavy they were willing to dispose of them for little or nothing providing the new comer would assume the indebtedness. There were in fact very many abandoned farms in Monroe county. We hear now of abandoned farms in New Hampshire and Vermont; they were not abandoned here in an absolute sense; they were not left to grow up to underbrush, but the owners of very many beautiful farms in Monroe county were obliged to leave them, owing to their inability to pay off the mortgages. My plan was to find such a farm as this and settle upon it. Therefore in response to advertisements I traveled over various parts of Western New York in search of a farm of this character. I finally heard of one twelve miles from Rochester, N. Y., and proceeded to make an examination. The owner and myself, seated in a rickety buggy had three miles to travel from the railroad station before reaching it. I kept my eyes wide open on the

way, noting the character of the neighboring farms, the inhabitants and the buildings. The surrounding farms were apparently productive, the large straw-stacks, barns and houses wore a prosperous look; the orchards were wide-spreading, full of fruit, and the fields well covered with grain, promising an abundant harvest. As I came near the farm I noticed the highway in many places had been washed out by heavy rains so that it was dangerous getting over the hill near the place. These roads had been utterly neglected for many years. In some places the grass had grown almost entirely over the road-bed, often huge boulders obstructed the wagon wheels, to the danger of breaking them and injuring the riders. We finally reached an eminence which gave us a fine view, and I was told that here was the farm which we had come to see.

There was nothing particularly inviting about the place. The road was not a prominent one leading from any particular place to any other particular place. The house was one of the old-fashioned kind, without a cornice; with blinds hanging by one hinge; occasionally a board was off from the siding of the house; shingles were fluttering in the wind; barn doors were off from their hinges; gates were unhung; old wagons and reapers were piled up against broken down gateways to keep the cattle from breaking through; everything indicating neglect, disorder, confusion and bad management.

I was told that the original owner of this place had settled upon it in early times, cleared it of forest trees and rocks and made himself an independent fortune; that his son had inherited his father's wealth, and maintained himself upon the farm until well advanced in years, when he had moved to a neighboring village to retire. There he leased the farm for a period of ten years, every year to a new man, each tenant having stolen all the fertility possible from every held without regard to the future crops or the future comers. Each tenant seemed to feel that it was his sacred duty to get every cent possible from the farm regardless of decency or common sense, or

good farming. Not one of these eight or ten tenants ever appeared to have nailed a board upon a building or fence, nor to have hung a gate nor to have planted a tree or shrub, or to have done anything to make the place home-like or endurable.

The house was located about fifty feet from the road and a picket fence extended from each corner of the house to the road, making a front yard of about fifty by seventy-five feet. This front yard seemed to have been occupied occasionally by swine which had rooted up every trace of former beauty and wallowed in the coolness of the freshly disturbed earth. Every inch of solid turf about the place had been plowed under for the purpose of growing potatoes and other crops. There was not a place where a child could place its foot on a wet day without becoming immersed in the mud. There were no walks or drives. It was indeed a dreary, desolate and forsaken looking place.

We hitched our horse in the barn, the floor of which was so shaky the owner hardly dared trust him to stand upon it, while we set out on our march of investigation over every field and through the woods and into the cedar swamp. Every corner and nook was investigated.

The land seemed to have been naturally productive. It was a friable, loamy soil, composed of sand and clay well incorporated, with a subsoil of same material, not too tenacious except in occasional spots. The land was rolling, neither too level nor too hilly. On one corner was a small piece of swamp, adjoining which were about ten acres of black muck, as black as a stove-pipe, extending down from one to three feet. This attracted my attention and appeared to be a very promising field. There was growing upon it at the time a very heavy crop of cabbages. It seemed to have been used for gardening purposes.

The fences on the farm appeared to have been suffering from the effects of a cyclone, the rails scattered in every direction, walls broken down and everything presenting great disorder. Even in the woods confusion reigned. Trees were blown down one over the other; we could hardly crawl through some places on account of the tangled condition.

There was one attraction upon which the owner laid great stress, and that was a spring-brook. A spring bubbled up near the house, forming quite a brook which passed diagonally through the entire farm, watering almost every field. This spring he claimed, and it was afterwards proved, was never known to show any decrease in the dryest season. The water was cold and pure. It was of great value to the farm.

There was an old orchard of about an acre, and alongside of this a smaller orchard of trees ten or twelve years planted. There were three or four pear trees in the door yard,

of seedling fruit that had never been grafted. On one side of the house was a row of peach trees the branches of which were mainly dead, but the live branches contained a number of inviting peaches. In this row of peach trees the burdocks and pigweeds had grown six to seven feet high. This was another evidence of the fertility of the soil; where weeds will grow to such a height as this it may be taken for granted that valuable crops will not perish.

After completing the circuit of the farm and criticising it as buyers will, and hearing all the good things that sellers have to say about things they have for sale, we again returned to the house. I then inquired for a spade; upon receiving it I dug down into the soil a distance of eighteen inches, finding the soil of good depth and its character to all appearances desirable. I was very much pleased with the soil. It was my opinion at that time that the farm could be made valuable, notwithstanding its exceedingly uninviting appearance.

This farm was encumbered by a mortgage which represented its full value. Had the mortgage been foreclosed at that time the farm would not have sold for enough to have cancelled the obligation, therefore the owner was glad to receive anything in exchange for it, no matter of how little value. He was almost in a condition to throw in some live stock as a present for taking this farm off his hands. As the reader may imagine, we had no great difficulty in closing a bargain.

I consider the selection of a farm a difficult undertaking. Location is important. It is desirable to be near a city, or large town, to be near a railroad station, to be near schools and churches. Nobody likes to live "twelve miles from a lemon." Next in importance is elevation. An elevated site is not only more healthy and attractive, but is apt to be better drained naturally and more exempt from late spring frosts. Some would say, buy low land and drain it. My experience is, that having once drained a farm you will prefer one naturally drained, although you have to search a long time for it.

The character of the soil is next in importance. In considering this everything depends upon what kind of farming or fruit growing you intend to pursue. If grass and hay, a clayey soil is desirable, even a strong clay. If a mixed husbandry, garden, fruit-growing, grain, hay-grass, etc., combined, nothing is so good as a friable clay loam. This is a mixture of clay with sand on a clayey sub-soil, making a strong and productive soil easily tilled, and easily kept in good heart. Sandy soil has many attractions to those not experienced. It is easily cultivated, dries off early in spring, plants begin to grow rapidly, it seldom needs draining, it is not cumbered by rocks, etc. But once having had experience with such land as this, I am certain you would select loamy land, though it requires much more cultivation. Sandy land is apt to lose fertility through leach-



ing, and it must be continually fed year after year, at a great expense, to keep up the heart of the soil.

The best time to look at a farm with a view to buying is in July or August, when the crops are growing upon it, a season when few are buying. Generally if a man is possessed with the idea he wants to buy a farm, he goes out to explore in winter when everything is covered with snow, or in spring when vegetation has not started, a very hazardous time to select a farm. It is best to proceed with careful deliberation, and if necessary to spend a whole year in looking around. It is far better to lie idle one year than to be loaded down with a poor farm, than which there is nothing worse, unless it be a poor wife.

But we were not choosers in the matter. We found here a good soil and we accepted the farm gladly as we found it.

Thus the farm was purchased. This was in the early fall of the year. Possession could not be given until the coming spring, therefore I had all winter to make my plans as to what should be done with the old farm. I thought at one time of exchanging it for a farm more desirably located and one with better buildings, thus during the winter I drove to the farm with several individuals for the purpose of making an exchange. During my winter visits the farm, as might be expected, looked more dreary than ever. But we did not succeed in making an exchange.

Some of my city friends learned we had secured a farm, and one in particular inquired what we intended to do with it; my reply was, we expect to make a living off from it in the best way possible, supposing of course that we would grow farm crops and lead an ordinary farm life:

"Why do you not grow small fruits upon this farm?" asked the friend.

"Why," I replied, "we are twelve miles from the city; there would be no sale for small fruits!"

"There is where you are mistaken," replied the friend, "you will find a better sale for raspberries and strawberries and other small fruits in the country at once and at better prices than you will at Rochester."

This was a new idea to me and I grasped it with considerable vigor, my natural inclination being toward fruit growing, as the reader may suspect from what I have said in previous chapters. I at once subscribed for every

horticultural paper I could hear of and read every horticultural book. I waded through libraries in search of information on pomology. I desired to learn what varieties were best, what methods were most practicable. I knew nothing of practical market fruit growing. When the spring came I had gathered quite a store of book knowledge on fruit culture. I can imagine the practical fruit grower who reads these words, smiling a very broad smile at my lack of experience, for all practical men have utter contempt for such information as one gathers from papers and books; and with good reason, for no matter how well read a man may be on any subject like this he is very poorly equipped for the work in hand without practical experience.

As soon as the snow began to disappear in the spring, I went out to the farm and began to remove numerous fences that divided the dooryard into small patches of ground used for calf-pens, pig-pens, henneries, and every other imaginable purpose. There were a dozen or more little yards surrounding the place, with broken-down gates to every one. This was my first step towards improvement; and it was a telling step, for when we had removed all these dilapidated partitions the place had a better look. It was no small undertaking, for the posts, in many instances, had been buried four feet for many years and were hard to remove. Now, instead of the yard being fifty by seventy-five feet, the size was increased to include about twenty acres, without signs of a fence to the right or to the left, except such as bordered the highway. We next attacked the orchard; trimmed off all the dead limbs, the suckers and superfluous shoots, which was another decided improvement.

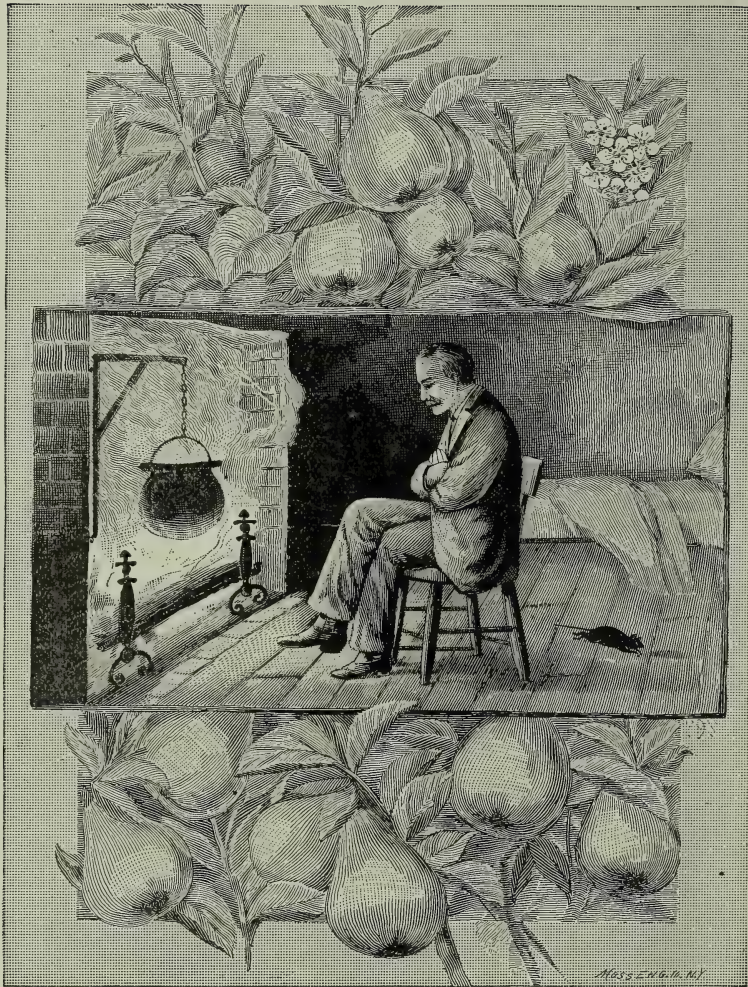
As the spring advanced I bargained with a family of English people to occupy the tenant house upon the farm and work the land on shares for one year, giving us one-half of all the crops, they furnishing everything, including the seed. This was a wise thing to do, for the reason that this family had horses and tools, while we had none. This left me free to carry out such plans as I had in mind. I next began to thoroughly renovate and repair the house. We did not attempt any marked improvements upon the buildings, because we had not the money with which to do such work; but we cleaned up, painted and patched until the place was inhabitable, and yet at very small expense.

## MY FIRST NIGHT IN THE OLD FARM HOUSE.

I remember the first night that I passed in this old farm-house. I came up on the cars to the neighboring depot, and walked over to the farm across lots. I did not know any person within twelve miles of this farm. I was not aware whether my neighbors were horse thieves, murderers or church-going people. I knew

nothing about the character of the inhabitants. When I arrived at the place there was not a soul there. The tenant had removed and I was alone in possession. Not entirely alone, as I found soon afterwards, for I heard the rats scampering in the walls overhead.

It was a cold, bleak, windy March evening



MY FIRST NIGHT IN THE OLD FARM HOUSE.



when I arrived. There was no stove put up. I had a cot in one corner of the room where I proposed to spend the night. In this old-fashioned house there were numerous brick grates, such as our forefathers had used; in the kitchen, which I was occupying, were the ancient andirons and cranes. To make things more cheerful, I gathered together chunks of wood and soon had a fire blazing in the old fireplace, which roared and crackled to such a degree that I began to have fears that it might burn the house up before morning.

Then the wind began to increase. I never knew the wind to rise so rapidly and to blow so fiercely. I discovered that window lights were out of almost every window sash in the house, and as the wind began to pour in I was compelled to make plans for better protection. In the course of an hour I discovered enough old straw and felt hats, etc., to stuff into every broken window-pane in my room. These had to be braced with sticks to hold them in place. As the wind continued to rise, the blinds banged and the windows rattled in their frames. The loose shingles on the roof seemed to be keeping time to the storm without. The winds moaned dolefully around the gable of the house. The branches of the trees scraped hoarsely against the building, and, to add to all, numerous rats began to scratch and scramble in the adjoining walls. I confess it was a dismal night that I passed in this house for the first time. Supposing these neighbors should fancy that I was a man of some wealth and should choose to cut my throat during the night, throw me into the well and escape with the ill-gotten booty. Very pleasant thoughts on which to fall asleep! Nevertheless I did fall asleep, and was awakened during the night by the rats, which had increased in boldness until they passed over the bed with great complacency.

Then I bolstered myself partly upright in my cot and began to think. The more I thought the less sleepy I became. The partly-burned chunks of knotty wood and the coals beneath sent out a feeble light. I could see the smoke rising lazily in the broad black throat of the ancient fireplace. What a story this hearth-stone could unfold, of fifty years of toil and patient waiting of old time inhabitants! Of husbands and wives overworked for the little gain that each year brought them. Of births and deaths; of weddings and funerals; of Thanksgiving gatherings, of winter evening frolics.

Perchance, before this fireplace many honest words of love were spoken, and many truths pledged. Where now are the many people who have in years gone by gathered here to be warmed and cheered? Most of them are sleeping in their graves. The hands which laid those bricks against which the smoke is curling have long ago crumbled to dust. The blacksmith who shaped those rough andirons

will never make the anvil ring again with his noisy hammer.

What business have I here? Was this broad acreage cleared of rocks and stumps for me? Did the builder of this house have me in mind when he laid these foundations? No; it is but an inn for me, and I a traveler on life's highway, simply stopping over for a night. By and by others will come and warm themselves here, and I far away. What a queer thing is life! We live not for ourselves alone; we build for others; we dig and delve that others may reap. Even our ashes after we are buried fertilize the soil for future generations.

What are my prospects here? How shall I, whose hands are white and soft, compete with the brawny-armed, sun-burned men who get their living from the soil? Shall I, who have been devoting my thoughts and energies to other work hope to excel those who have spent their lives behind the plow? They are scarcely making both ends meet at pay-day, though scrimping and saving and toiling with all their strength. How shall I, with my dainty, girlish, city wife, fight the battle here to a successful finish?

My friends have no hopes of my success with such a forlorn venture. They expect to see me sold out by the sheriff within a twelve month. Are they right? No; they are wrong! I will succeed. I must succeed. I will bend every nerve; I will strain every muscle; I will think and study. There is some way out, if I only find it, and find it I will!!

The next morning opened clear, bright and cheerful, and supplies soon arriving I was prepared to keep bachelor's hall for several weeks, not desiring to bring my young wife, who was a city girl accustomed to city ways, to such a place until it had been improved.

#### ABOUT MY CITY WIFE.

Young men in the country are often warned not to marry city girls. Rural papers have spent as much time in raising the danger flag over this class of matrimonial venture as mariners spend in guarding against sunken rocks in the line of ocean steamships. But my experience with a city girl for a wife was not disastrous. Indeed, I will go so far as to claim that there are many city girls who would make good farmer's wives.

My wife was less than eighteen years old when we were married. She had always lived in the city. When we were married we supposed we were in comfortable circumstances financially, and that we would continue to live in the city. She did not move to the country from choice.

I am glad to acknowledge that our success on the farm was largely owing to the fortitude, economy and adaptability of my wife in the new position in which she was placed. She accepted the situation bravely, and made herself helpful in every way possible. She had been accustomed to have every comfort in

her father's nice city home. Her sisters continued to enjoy many privileges of which she was deprived, yet she did not complain. I regret that I cannot specify the many ways she found for aiding me in my work and plans.

My wife did not come to the farm until I had been living there nearly two months. She was very young, and her oldest child was a baby. It was a great trial for her to leave the city. In fact, it did not seem as though she could leave her comfortable home there for such a dreary, God-forsaken place as I had pictured the farm to be, for it was my intention to make it appear to her as bad as possible, so that when she should arrive she would be disappointed in finding it better, if anything, than she had expected. I remember the afternoon that I went to the depot to bring her to this new home. How different the beginning of our life from what it promised to be on the day of our marriage!

I went to the farm from the depot in a round-about way; and when a long way off my wife pointed to buildings nearly a mile distant and exclaimed, "I believe that is the farm!" And she was right. How she should have picked it out in this way has seemed remarkable, as there was no particular feature named by which she could identify it.

We could not have chosen a worse day for visiting the farm. The mud was nearly a foot deep in the roads, rendering them almost impassable. When we drove into the yard my wife expressed herself as pleasantly disappointed, saying that she expected to see a much worse looking place from what I had said. She remained at the farm many weeks before returning for a visit to her parents. It was hard for her to return to the farm after each visit to the city, but on each return it was less painful, until finally she became so attached to the place that when we moved away from it the past year, she wept. She had become even more attached to it than myself.

I have so much to say about this old farm, and how we made it pay, that I hardly know what to omit; and it is necessary to omit very much in order to get the material into the required space. The first year upon the farm was a busy one, as you can imagine. There was everything to do and but little money to do it with; and yet that was a very happy year. Everything was new and strange; there was no monotony about it; it was a new enterprise, new place, new home, new neighbors,—everything new. In addition to moving and getting settled, fixing up the house and yard, I planted, the first year, the foundation of my future work. The spring planting consisted of two thousand strawberry plants, a hundred

or so each of the more valuable kinds of raspberry and blackberry, a few currants and gooseberries, three hundred apple trees, a few peach trees, grape vines and quinces. I also planted a small block of root grafts which a friend had grafted for me during the winter. By the way, these root grafts, considered by many very difficult to succeed with, were the most complete success of any planting of the kind that I have ever made. I also planted along the roadside rows of maples, extending the whole length of the farm. I was remarkably successful in this first planting. Everything seemed to thrive. There was no failure.

I often think that it was well for me that I had little money to begin with, believing that everyone who begins a new enterprise should begin in a small way. This is exactly what everybody does not like to do. Most people would like to begin in a large way, having great confidence in themselves; but the fact is we are liable to make mistakes. Beginners in every line of business make mistakes. Now if those mistakes are made in a small way they are not disastrous, and one can learn as much by experience in a small way as though he were experimenting on a very large scale. Thus I found that many varieties of raspberry and strawberry and blackberry that I had planted were not valuable; these I discarded at once. If I had planted largely, it would have been a very expensive lesson for me to have learned that these were not valuable varieties to grow.

I had at this time little experience in the nursery business. There are few kinds of business that require larger experience. Indeed, a man cannot live long enough to learn all there is about the propagation of trees and plants. In the beginning I made very many mistakes and met with many failures in growing trees, as do all who begin in that line. But as my plantings were small, owing to our limited means, our losses were small and did not cripple us. I have often thought that had we been possessed with fifty or one hundred thousand dollars when we began the nursery business we might possibly have lost it all. We should have planted largely, and not having had the experience necessary would have met with large losses. We would not have known what varieties to propagate; might have propagated varieties for which there would have been no sale. Many experienced nurserymen are compelled to burn every year many varieties for which there is no demand. Therefore, you who have small means do not complain and envy those who have larger capital. It is well in beginning your enterprise to begin with small capital. Learn to manage that well; experience will come as your capital increases.



## MY FIRST YEAR'S EXPERIENCE.

### CHAPTER VI.

As the reader may imagine, my first year's experience in practical market fruit growing was not in any sense remarkable as regards the amount of income or the number of acres under cultivation. There is one drawback in regard to all kinds of fruit culture: In farming or gardening the seeds are planted in the spring and the crop harvested the fall of the same year, thus the income the first year may be as large as any succeeding year. But not so with fruit growing. In case apple trees, pear trees, or other large fruits are planted the planter must wait several years before a full harvest is reached. With small fruits, however, such as raspberries, blackberries, currants, etc., a crop may be gathered the second year after planting, and with strawberries, the first year after. Thus the small fruits possess attractions for the poor man that the large fruits do not, as many people cannot wait for the income from the larger fruits: they have not sufficient capital. The strawberry fruits sooner than any other fruit plant. Indeed, it tends to bear the first season planted, a few weeks after planting, but it should never be allowed to fruit so early as this. The true plan should be to rely upon small fruits for early income, yet plant large fruits for later reward.

Having a few new varieties of strawberry, I succeeded in selling to my neighbors several dozen plants the first season, also a few raspberry plants, but the entire income from them for the first year was very small, scarcely worth mentioning. I was not disappointed in this for no income from fruit growing was expected the first year, but it was necessary that I should have some money coming in then, therefore I looked about me to that end.

As I have before stated, in one corner of the farm was a cedar swamp, a tangled mass of fallen trees, stumps and underbrush through which a strong man could hardly force his way, and through portions of which, perhaps, man had never trod. Here were standing old cedar trees of considerable size, and many that had fallen years before were found to be entirely

sound, therefore as soon as the winter of the first year opened I set myself to work in this swamp getting out fence posts and stakes—having discovered that there was a demand for them among the neighboring farmers.

The first winter I cleared several acres of the swamp, the result being many thousand posts and stakes.

The winter was somewhat mild and the swamp did not freeze over—indeed it seldom does freeze very hard in cedar swamps—therefore it was with great difficulty that I could make roadways into this boggy and mucky soil. It was necessary to throw down brush in order to make the soil firm enough to hold up the horses. In many places rails were used to make a corduroy road, (in spots that were particularly soft).

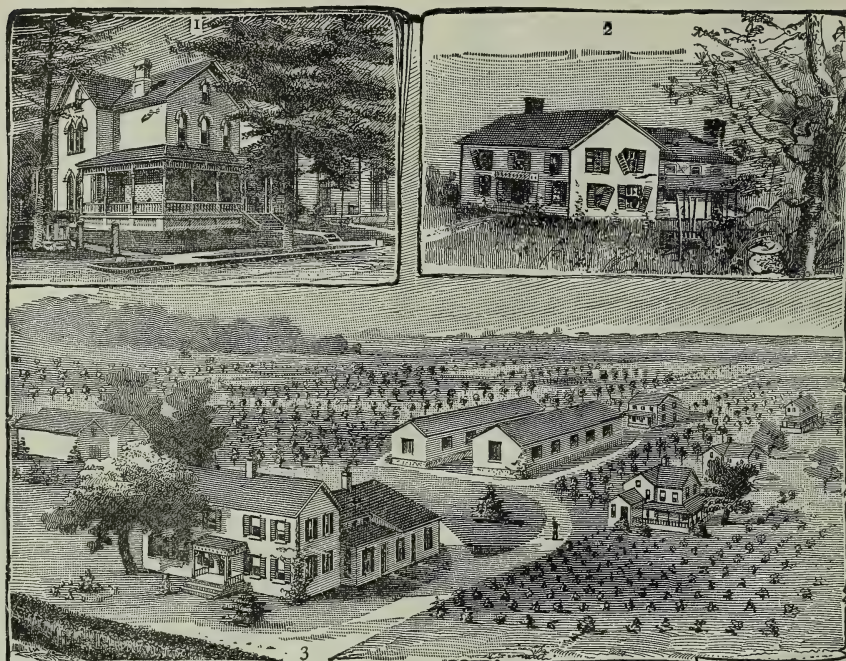
Thus we succeeded in making one thoroughfare into the swamp and several laterals; and yet it was necessary to carry the posts and stakes on my back often considerable distance to get them upon the sleigh.

I became very enthusiastic in this work, hard as it was, and enjoyed myself hugely. I never had a better appetite. During my sojourn in the city I had been a victim of dyspepsia and had to be very careful of what I ate, but now I could digest almost anything.

Often the high, top-heavy load, upon which I was seated, was overturned at considerable risk of breaking my bones. All in all it was quite an experience, this logging business as it might be called, for I also drew many logs to the mill to be sawed into boards for repairing the old place. The tops of the trees were cut for firewood, these I also drew to the house.

I had no difficulty in disposing of the cedar posts and stakes to neighboring farmers at good prices, therefore I continued to clear the swamp until all the cedar had been removed.

I speak of these incidents to suggest what may be done in emergencies by others. This cedar swamp was of particular value to me at that particular time; had I deferred clearing it until years afterwards its value would not have been worth one-hundredth part as much to me as it was at that time. It was absolutely necessary to get money out of some



CUT NO. 1 REPRESENTS THE CITY HOUSE WHICH WE LEFT. CUT 2 IS THE FARM HOUSE AS WE FOUND IT. CUT 3 IS SOMETHING LIKE THE FARM AS IT NOW LOOKS.

thing on the farm and this was the only available scheme so far as I could see. But wherever one is located or whatever his circumstances may be, there is almost always some way out of difficulties if sufficient thought is given.

Many people complain that they cannot find a position suitable for their qualifications; it is a good rule to do what you find at hand to do and do it well; by and by something better is likely to turn up; do this also well, and by and by better and better things will be offered until one's ambition is better satisfied. Supposing after my city experience I had waited for something genteel and highly profitable to turn up? In that case I should yet be waiting empty handed.

I was talking with a man yesterday who complained that he could find nothing to do. His trouble was caused by the fact that he was not satisfied to do what was offered him or what was within his reach. He talked about moving west, showing that he was longing for a place where work was more plentiful, wages higher and conditions more desirable every way, but my experience taught me that it was not so much the place where one was located that success depends on, as upon the man himself and his willingness to do anything or everything honorable that may be offered. Thousands of people go west every year, to meet with dis-

appointment. They find the same condition of things there that they had to struggle against here; competition there is even worse; there are hundreds of idle men in all parts of the west.

As the reader may imagine, I did not dress upon the farm as I did in the city. In the city I took particular pride in my personal appearance and some of my friends even thought I gave too much attention to my dress. On arriving at the farm and getting interested in the work in hand, I found old clothes most convenient and suitable for the occasion. Indeed, I have since come to the conclusion that I was altogether too thoughtless in regard to my dress upon the farm. Certainly a broadcloth coat and patent leather boots would have been out of place while carrying out posts and stakes through the muddy swamp, and yet I need not have looked like a tramp, as I very much fear I did. I remember something of my dress at that time: I wore a pair of blue overalls, which were very large in size in order to get on and off easily; my overcoat was one that had cost considerable money in its day, when the fashion was to make them tight around the waist, with a very flowing skirt, a style which soon went out of date, and which looked ridiculous when no longer worn; my cap was an astrachan wool, with an adjustable front piece that would pull



down over my eyes or turn up, and ear tabs of the same accommodating style which would pull down over my ears or tie up over my head; the string, however, that held up these ear-tabs, had become broken and the result was that the huge ear-like tabs stood out at an angle in a very ridiculous manner.

All in all, undoubtedly I presented a ridiculous appearance, but I was entirely oblivious to all thought of attractive dressing.

This was a mistake. I believe that farmers should dress so that they would not look ridiculous in case their friends should pounce in upon them when at their work. They need not dress expensively but certainly should wear well fitting clothes and such as are not outrageous in any degree. I have in my travels seen farmers dressed very plainly and yet looking neat, while others were an abomination to see and a man could not possibly greet a friend with any degree of equanimity, dressed in such an uncouth manner.

I remember one morning, when dressed in the peculiar garb to which I have referred, going into the barn cellars to look at a lot of swine which we were fattening; it was not my work to feed or care for these swine but as it happened this morning the floor was strewn with cobs and litter, and a shovel lying at hand I picked it up and began to clean out the rubbish. An old friend, a city business man, happened to be looking for me at the moment and had chanced upon me in this uninviting garb and uninteresting work. The last time I had seen this gentleman I was behind the bank counter, he was in front of it, and I was handing out to him several thousand dollars. You can imagine he was somewhat taken back at seeing me in this changed condition and position. I simply relate this as one of the amusing instances of my early experience.

#### HOW I SOLD FRUITS.

As I was without experience I had anxiety as to the disposal of such fruits as I would grow, small as the quantity was at the start. I hardly dared trust myself to sell at retail from house to house, not knowing what the result would be and fearing that perhaps the fruit might perish on my hands, therefore my first step was to arrange with a grocer who was at the same time running a lumber yard, who agreed to take my berries and pay me in lumber, which was needed for repairs upon the place, etc., this contract to run for one year only; the result was that I received a very small price for my fruit, really a wholesale rate, and paid a very large price for lumber. I might just as well have received a third more had I known better or had previous experience. I found, subsequently that there was no trouble in selling all the fruit we could produce on this farm, at retail, without the aid of any commission or wholesale houses. This would not have been the case had we devoted ourselves entirely to growing strawberries or any

one species of fruit, but since we grew almost every kind of fruit, ripening at different dates, we had at no time, any very large amount to dispose of. I should recommend this course to others for the reason that it requires much less picking force to pick or gather fruits throughout six or eight months than it would to gather it within a few weeks; it also required less expenditure in teams, wagons, etc. Further than this, where different kinds of fruit are grown, a man going out to sell can place in his wagon an assortment of large and small fruit. I would often have in the fruit wagon grapes, quinces, pears and apples, quite an assortment, which met with more ready sale than if it had all been of one kind.

My advice to all young fruit growers is to "go slow and learn to peddle." This may originally have read "learn to paddle," but I consider it more important to learn how to peddle than to paddle in the small fruit line. Peddling is something that the human race has a strong dislike for, but of all the human family no class has so great a dislike for it as the farmer. Farmers will not peddle if they can help it; they prefer to take a large load of wheat to market and sell it to the miller in a lump; it brings in a considerable sum of money which they can put in the bank at once and it seems to bring about a result that peddling does not. But this is all seeming, for in fact the man who peddles, other things being equal, makes four times the money that the man makes who does not sell in that way.

In common with all others I disliked peddling, nevertheless I made my early sales largely in that manner, and I cannot say that it did me any injury. To be sure it is not what a man's ambition would be pleased with, but there must be a beginning to all things and there is no better beginning than this in fruit growing: Learn to peddle. Thus, after my experience with the lumber dealer I may have been seen at early morning mounted on my berry wagon with my horse's head turned towards the neighboring villages. After a short time our fruit became well known in these villages, and as it was freshly picked and of good quality I had no trouble in disposing of all we could grow. In fact I came to enjoy every part of my new life. In the first place the work I was doing was a necessity, and it is well to make the most of necessities.

I remember one day as I was selling my strawberries, passing a man upon the highway who but a short time before had placed in my hands ten thousand dollars for investment and who had been faithfully served. I could not help contrasting my present position with that of the past, but I was so enthusiastic in my work that I was not troubled, and the past was easily forgotten.

There are very few who appreciate what the income will be from a wagon that goes out daily from the farm with produce to be sold at retail.

No one day brings in a very large amount, but taking all the days of the year the amount is surprising. I kept an exact account of every penny that came in from the sales of fruit from this farm. The first year, as I have stated, was trifling, the next year it was many times larger, and thus it increased every year, often doubling, never increasing less than one-fourth, until the annual income was surprising, far beyond my expectation. It is a very pleasant thing to look back upon, this column of figures, the first entry being almost nothing, the next a little larger and still larger, forming quite a pyramid with the largest figures forming the base of the column.

Of course as the plantings were increased more berry wagons were started in every direction. We also had larger wagons with two horses attached, with double floors in the wagons, every convenience possible for conveying the fruit in the best condition to the market. Later on, after the business became better established, I found more profitable occupation for my time than to sell my fruits; then I employed others to sell. I found that every man was not adapted to this work. It was remarkable, taking a dozen men, to find the difference among them in their ability to sell. Some would make a return of prices twice as large as others, but no two men would report the same prices; one particular man would always be in advance of others, therefore the fruit grower should have in mind securing a competent man to peddle his fruits. It requires some business tact to sell; a man should be able to talk well and yet talk not too much, should have a pleasant manner and should deal honestly with all he meets, never deceiving. And yet, notwithstanding all these rules, there are men who can sell and men who cannot.

#### OUR HOME MARKET.

My father and mother, who were living with me on the old farm, had never enjoyed fresh fruit to the fullest extent. My father in his younger days had been a successful farmer who felt that he had little time to devote to fruit culture, therefore he had no strawberries and raspberries in his garden nor a good supply of other fruits. It pleased me very much to notice how these older people enjoyed the fruits upon our fruit farm. They looked forward to the ripening of the strawberries with as much eagerness as any of the younger people. We had an abundance of every kind of fruit from the earliest to the latest, and I cannot help thinking that it prolonged their days and increased their health to a remarkable degree.

I have at times at horticultural meetings been tempted to state how many bushels or crates of strawberries our family of six to ten ate in one season. I am quite sure that all who listened to my statements thought that I

was either mistaken or was not telling the truth. I do not think that any inexperienced person could correctly estimate the great amount of fruit that such a family will consume when they have an unlimited supply from day to day, from the earliest to the latest. Our strawberry season would hold on nearly a month; not that there would be sufficient pickings to market for a month, but from the very earliest to the very latest that was gathered—and the latest were gathered weeks after we had stopped marketing—the season would be at least a month. I am sure that a two-horse wagon-load of strawberries would not represent the quantity that our family would consume in one season.

The amount of raspberries, blackberries, grapes, pears, plums and apples and other fruits that were eaten upon the farm was no less. I state these facts for the benefit of those who contend that it is cheaper to buy fruit than to grow it upon the farm. This is a great mistake. Even so distinguished a writer as Mr. Terry, of Ohio, used to contend that he could buy fruit cheaper than he could grow it, but since he has begun to grow small fruit he finds that he can grow at a trifle the cost of purchasing.

The fact is, when one has to buy his berries or other fruits he buys sparingly and his family do not eat as much as they would if they were gathered upon the farm and were held in more plentiful supply. Again, the quality of fruit purchased does not compare with that which is gathered fresh from the plants, and the amount consumed depends upon the quality. I remember at our city home the past spring, we bought early berries that came from the south and later those grown about Rochester, but after a little bed upon our own home began to ripen, we noticed that the quality of our own berries was far superior to those that we bought. It is the same with other fruits. Peaches that are sold in the market have to be gathered before fully ripe and such peaches cannot compare in quality with those that have fully ripened upon the tree before picking.

There is no cheaper food for hired men upon the farm than grapes, pears and apples or any of the fruits that are grown there. An acre of grapes requiring but little more culture than an acre of corn or potatoes will produce several tons of food. I do not know how an acre can be so profitably employed as in growing this particular kind of food for the family, even for the hired help. Farmers make a great mistake in not growing more fruits, and especially the grape, for home consumption; not only are they a cheap form of food but they are very acceptable and being wholesome, enable those who eat them to do more work and do it better.



## MY EXPERIENCE IN STRAWBERRY GROWING.

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### CHAPTER VII.

In order to relate how we made the old farm pay, I shall have to tell of my experience in growing the different kinds of fruits, and will begin with the strawberry.

The strawberry is my favorite of all fruits for profit, as it is with very many fruit growers. It comes into bearing sooner than any other fruit after planting, bears more uniformly every season than most fruits, sells readily in almost any market, and yields a larger profit as far as my experience has taught me.

Our greatest misfortunes in growing strawberries were owing to the losses incurred by late spring frosts. These frosts are liable to occur almost any season. While such frosts do not entirely destroy the entire crop, they often reduce the yield considerably. There are seasons when no frosts occur, but about every third year in our locality, where we had no body of water to ward off the frost, damage was done. We were also more susceptible to frosts on account of the ground being located somewhat low; we found that a very little elevation, even, preserved the crops from frost. For this reason we always recommend fruit growers to select elevated sites, not only for strawberries but for all fruits. We found that strawberries planted in orchards or near timber lands were not injured by frost, while those in neighboring fields were seriously injured.

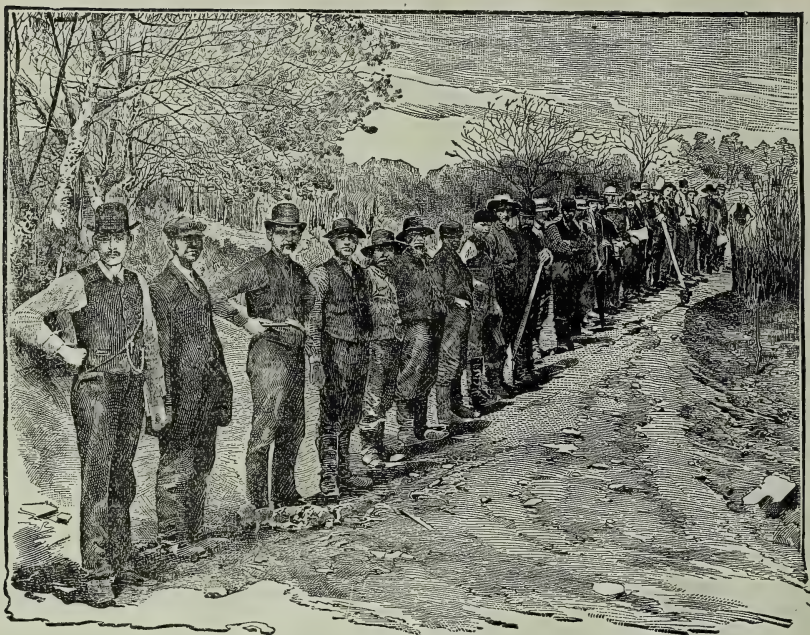
There have been many attempts to prevent loss from frost, the most successful of which is to envelop the field with smoke at about two o'clock in the morning, when the frost is beginning to do its work. One large pile of brush covered with wet straw will make a tremendous smudge, which will even envelop a large field, if the wind is not blowing; on windy nights the frost is not so serious. It would certainly pay any one to have piles of brush adjoining their strawberry fields for this purpose.

Our experience taught us that it was not wise to plant large fields of strawberries unless one had capital to give such fields the best possible culture and most liberal, thorough fertilizing. We made our best profits from small plats, thoroughly cared for. There is no objection to those who have large means planting a large number of acres; one's planting should compare favorably with the amount of capital he has to invest for labor, fertilizers, &c.

Our soil was not sandy, but clay loam, inclined to grass naturally. If one of our fields was left to itself for a year or two it would be self-seeded and yield a good crop of hay without any seeding on our part. Such soil as this requires more hand work than sandy soils, but yields larger crops, and the plants continue in bearing longer on such ground than on lighter soil.

I have known beds to bear upon our soil for six years, not profitably, but nice crops for family use. Ordinarily, two years was as long as they were left for market purposes. We never attempted growing strawberries in hills and do not think hill culture is profitable, except possibly near such cities as Boston, Philadelphia and New York, where remarkably high prices are paid for very large fruit. The soil has to be mulched when strawberries are grown in hills, with great care, not only to protect the berries from the sand in fruiting, but to protect them from heaving in winter. Our best success was in narrow, matted rows. While most people do not recommend spring cultivation, on our soil it was absolutely necessary, or else the grass and other weeds would overshadow the plants.

We cannot remember any entire failure of the strawberry crop. Every year brought us in a very snug sum of money, which was very acceptable. From the strawberry crop came the first money of the year, coming in June, when no other crop was ready to be marketed. I can recommend the strawberry with great confidence as a market crop to



PAYING OFF THE LABORERS.

people with small means. I often wonder why people who live in villages, who are poor, who have a small piece of ground, do not plant a few strawberries for the home market. They could certainly plant nothing which would yield so large a reward for the outlay.

In addition to the fruit sold from the strawberry beds, we received an annual income from the plants, almost equal to the crop of fruit. These strawberry plants were always in demand from neighbors or friends or nurserymen and later from patrons in different states. No matter how largely we might increase our bed, we could never fully supply this demand for plants.

Naturally the question of varieties was a very serious one and one that required considerable attention. As we increased the sale of plants, it was necessary that we should grow the newer kinds freely. In order to be posted on these varieties we had to travel about considerably to see varieties in fruiting in different places and to learn experience of other growers. We found it would not do to plant every new variety that was offered, and yet each season we made a practice of planting three or four of the best new varieties, as far as we could be informed.

#### EXPERIENCE WITH RASPBERRIES.

I mention raspberries next in order, as perhaps they furnished the next best results in our early experience in adding to our income.

They also come into fruiting very soon after planting, and are very reliable: a crop very seldom failing. I can remember only one year of fifteen when the raspberry crop failed to give us a good harvest. We grew the black-cap raspberry more largely than the red; I don't think, however, that they are any more profitable.

When we first began to plant our small fruits, although the amount planted was small, we had greater difficulty to sell the fruit than when we grew large quantities, for the reason that the inhabitants of that part of the country were not in the habit of buying fruits; they had not been offered to them freely. The first few years they hardly knew whether they wanted to buy them or not—bought sparingly; but in after years they consumed very many more, and, although we increased our plantings largely, it was almost impossible to supply the increasing demand. This, I think, is the experience of almost every one in growing fruit. If they are pioneers in the work they have to create a demand for their goods. I was always surprised each season by the amount of fruit consumed by our immediate vicinity.

I will undoubtedly surprise the reader when I state that we had never shipped our small fruits, such as strawberries, raspberries, and blackberries, but had always sold them at nearby towns from our own wagons. These home



markets are the best. Fruit growers should never ship fruit to distant cities to be sold by commission houses, unless he has a surplus that cannot be sold at home. Had we grown entirely the strawberry or the raspberry, our home market would not have consumed all these fruits; but as we divided our attention among all the different species the home markets required all; and the same patron who bought our strawberries bought our other fruits later on.

We found that the raspberry as well as the strawberry did much better on upland than on low ground. One of our early mistakes was planting the raspberry on low land, inclined to be wet. No matter how rich such land nor how desirable in every way, if it is inclined to be wet in the spring of the year, that is if it needs draining at all, or if water stands upon it at any season of the year, it is not desirable for the raspberry, nor, in fact, for any fruit.

I took great pride in my berry fields, and it was with great pleasure that I walked through the broad, vigorous rows bending down with their burden of red berries, speckled with black. Such a field is a beautiful sight, but particularly beautiful to him who relies upon this crop for his bread and butter.

We erected a rude dry-house, in which we dried the few berries that were picked on Saturday or which were gathered before a storm which prevented the berry wagons from going out. Some such evaporator as this is strictly necessary on every fruit farm, to make use of such fruit as would otherwise be lost. The product of this small dryer often sold for from one to three hundred dollars per year, in the early days of our experience, which was a sum worth considering.

Our early planting of the raspberry was among the trees of the young orchard devoted to apples and pears, quinces, &c. The berry bushes thrived well here and bore large crops, and yet I would advise the planter not to repeat this experiment, providing he has other fields that are entirely unencumbered by any trees. Our mistake was in permitting the raspberry to remain upon this orchard four or five years; the older it grew the more grass accumulated along the rows, which attracted the mice, and these did some damage to the apple trees.

We planted the black raspberry in rows seven feet apart, plants three feet apart in the rows, allowing them to form what is called the hedge system. We used no stakes or wires, which are entirely unnecessary in field culture.

The raspberry increases rapidly from the tips, in case of the black, or from suckers in case of the red raspberry. Thus we secured a crop of plants each season which, meeting with ready sale brought us fully as much money as the berries themselves. This plant business in connection with small fruit culture, should be developed by all fruit growers. Here is an additional crop that can be secured without much additional expense.

As we found this demand for plants continued to increase each year, as our patrons discovered that we sent out everything true to name, we were led to propagate more largely, and gradually to begin the nursery business in connection with our fruit growing.

#### EXPERIENCE WITH CURRANT CULTURE.

When we began fruit growing we did not plant largely of the currant. It did not seem to us possible that the farmers and villagers about our place, who could grow currants so easily in their own gardens, would depend upon us for such fruit. We, nevertheless, planted a few bushes, and found that there was a demand for them everywhere; even the farmers bought them from our wagons, at good paying prices.

There was this in favor of the currant that would not apply to the strawberry or raspberry; it could be picked at the convenience of the grower. There was a season of nearly two weeks in which the currants could be picked or remain on the bushes. The currant also was a regular bearer and required no special attention. It succeeded on almost any soil, therefore each year we increased our planting of the currant.

I do not know that I could recommend any one to plant large fields to the currant, but an acre or so would be very profitable on any fruit farm.

We found that no fruit appreciates rich soil and good culture more than the currant. Indeed, it will grow anywhere and bear fruit under any circumstances, even though the grass is growing as high as the bushes, but under more favorable circumstances it will yield crops that are surprising even to the most experienced. I have seen single bushes of the currant that looked as though they would yield half a bushel of fruit, and I think they would yield as much. We gave them plenty of room between the rows—seven feet. We made a mistake in not planting them so they could be cultivated both ways. We found that on wet soil the plant would be heaved out each winter, by the frost, several inches; thus, after four or five years, each plant would be situated on a hummock. This was a serious drawback, and the currant on such low, wet land, was not productive enough for profit. If grown on such land from necessity, it should be drained and heavily mulched.

We found no trouble in protecting from the currant worm by applications of hellebore, applied very early in the spring, when the first indications of the insect are discovered. The usual cause of failure is putting off the work until the leaves are largely destroyed, after which it is almost impossible to destroy the insect.

We also found that the propagation of the currant is very simple, and that the demand for the bushes was continuous. But few cuttings could be secured from bearing bushes;

therefore, after a time, we had plats of currant bushes that were grown entirely for cuttings. These bushes were cut down to the ground every year the last of August, and the cuttings buried in the ground until planted. We usually planted in September, at which time the cuttings had become calloused, and in many cases numerous white shoots had formed upon them. Altogether, the currant was a very profitable crop at our farm.

#### EXPERIENCE WITH THE BLACKBERRY.

We did not consider our soil specially adapted to the blackberry, which is usually considered to prefer a sandy soil. Nevertheless, we always had the leading varieties in bearing, and grew them to a reasonable extent, and always with profit. There were less blackberries grown in our locality than any other fruit. No fruit met with a more ready sale or higher prices.

The blackberry is a delicious fruit, makes one of the best pies, and is excellent in almost any shape. We found the blackberry very sensitive to late spring frosts, and some of the varieties were injured by severe winters, the same being killed back to the ground; but the Snyder, Taylor, Agawam and Minnewaska, etc., were entirely proof against injury by winter killing. I consider the Snyder the hardiest of all blackberries. We planted these a little farther apart than the black raspberries, owing to the strong growing canes, and the thorns on them being so troublesome in cultivation. Where planted closely together, we have known the climbing to be seriously torn by the man cultivating them, even during a few hours work among them. In fact, our experience with all fruits was they should have plenty of room. The mistake made by most people is in planting them too closely together. We often met with failure by planting the blackberry too late in the season. To succeed well it should be planted in the fall or early spring, on account of the germ of the new season's growth, which is very tender and liable to become broken if planted late. When this young germ is broken the plant is retarded for several weeks; sometimes it never grows after this germ is broken. I have known the young blackberry plant to remain dormant until July, and then send up a vigorous shoot; therefore the planter should not be discouraged if his blackberry plants do not begin growth immediately after planting.

We found the blackberry very productive, especially the Taylor, which was our favorite for many years. We never wired them or staked them. We simply cut back the annual growth about one-third to keep them within limits, so as to admit the cultivator. The blackberry with us would remain in fruiting longer than the raspberry on the same ground. Provided the weeds are subdued, and the ground kept rich, it will remain in bearing ten

or twelve years on the same ground. The same may be said of the currant and gooseberry.

#### EXPERIENCE WITH GOOSEBERRY.

We were absolutely sure that none of our patrons would want to buy gooseberries when we began fruit growing, therefore, on the start, we gave them very little attention. Later on, however, we planted different varieties, more for propagation than for fruit. Finding numerous berries on the bushes at picking time, we gathered them without much faith in their being sold. Indeed, they sold slowly the first year or two. People looked askant at them—hardly knew whether they wanted to buy or not. I doubt if they had ever seen the gooseberry before as a rule, for there is no fruit so little known in this country as this. Very few gardens have gooseberry bushes. There seems to be an idea prevalent that they are difficult to grow; that they are subject to mildew, or something of that kind. It is true that the foreign gooseberry often mildews in our climate, but such varieties as the Houghton, the Downing, Smith's, and many others, have never been known to mildew on our place.

In later years we began to have quite nice crops of the gooseberry. The bushes were literally loaded down with the berries. It was, indeed, a beautiful sight. It seems as though every available spot on every branch was filled with fruit.

Our method of gathering was to place the hand at the base of the fruit stem and by one sweep remove every berry from the stem; we thus swept them off the bushes in handfuls, one picker gathering ten or twelve bushels a day. In thus sweeping them off, numerous leaves came off with the berries; in order to remove these we ran them through the fanning mill, as we would a lot of beans, and thus the leaves were removed and the berries were as clean as though each one were picked by itself.

We never, in later years, have had any trouble in selling gooseberries, and they were a profitable crop. They can be grown almost as cheaply as potatoes. They make excellent pies and jams. In England the jam is used on bread in place of butter, owing to its being produced much cheaper. Gooseberries are good also to eat out of hand. There are very many varieties almost as good as an apricot. They are also attractive in appearance. We should not consider our fruit farm complete without a quantity of gooseberries growing upon it.

It took us some time to learn how to propagate the gooseberry. We supposed, like many others, that it would grow upon cuttings; but it will not, successfully. We succeeded eventually in propagating it by making stools about the plant in June, which consisted of earthing up about the base of the plant when the wood



was soft and green. The green shoot thus banked up threw out roots, and these being removed in late fall and planted, made fine plants the succeeding year. We found that everything depended on the gooseberry bush being banked up when the wood was soft and green. If the work was deferred until the wood became hardened, very poor success was met with.

#### OUR EXPERIENCE IN GRAPE CULTURE.

Our farm was not located in the grape section, strictly speaking. There are three great grape sections in New York state: Chautauqua county, Yates county, and the Hudson River district. Notwithstanding this, crops are grown almost all over New York state; but as we were not in the grape district we began very modestly to experiment with the different varieties.

We found, owing to the lack of bodies of water about our place, that the late spring frosts were liable to cut down our vines about every third or fourth year. Aside from this we had excellent success with early varieties. Late ripening varieties, such as Catawba, were not a success on our place. We recommend all planters of grape vines in northern sections like ours, to plant only very early varieties—none later than Concord, and all earlier, if possible. Our Concords were usually a great success, but occasionally they would not ripen. Perhaps once in four years the Concord did not get ripe enough to be salable, but our Champions, Delawares, Brightons, Moore's Early and Wordens always came to perfection and sold at paying prices. We did not grow these grapes in large enough quantities to be sold at wholesale, as a usual thing. We usually had no difficulty in disposing of them to our retail customers. They were placed in the wagons with other fruit and sold in neighboring villages. The demand seemed to increase every year, and we increased our planting the same as we did our other fruits. It would not seem possible that the farmers and villagers would buy grapes when they could grow them so easily, but the facts are that they will buy them and that they do not grow them—do not seem to know how to grow them.

The amount of grapes that can be grown upon an acre is surprising, and the small expense at which they can be grown is equally surprising. In California they sometimes sell at ten dollars a ton; in New York state we consider sixty dollars a ton a moderate price. The fact is that we could grow them at a third of that price. Our experience teaches that grapes are the most economical food possible for our laborers; they are nourishing, healthful and appetizing. We can recommend farmers to grow grapes in quantity, as cheap food for their families and hired help.

Every year it has been expected by grape growers that there would be a glut of grapes, owing to the immense amount grown about

the country. To the surprise of all the demand has kept pace with the planting, and grape growing at the present time is one of the most profitable pursuits in the fruit growing line.

Great care should be taken to learn whether one's soil is adaptable to grape culture, before planting. Certainly grapes can be grown in some localities much cheaper than in others, and it would be folly for those poorly situated to hope to compete successfully with those more favorably located, in growing grapes on a large scale. We attempted to become posted on the newer varieties of grapes, as we did in regard to the newer varieties of other fruits, and to plant each season a few vines of each of the more valuable and newer varieties. In this way we became informed upon the subject and secured many valuable new varieties.

#### EXPERIENCE WITH LARGE FRUITS.

As the reader may imagine, the early years of our experience in fruit growing were mainly devoted to smaller fruits. We had planted the apple, peach, pear, plum and cherry, but these did not come into bearing for many years after the smaller fruits had yielded abundant harvests.

The first to come into bearing were the peaches, which were planted in rows between the apple trees and in the apple tree rows. We secured three or four good, fair crops of peaches from these trees, which sold at high prices and were profitable. After this they were removed and the ground devoted entirely to the apples. Our experience with peach culture would teach us that peaches are a risky crop to plant in our locality, on average farm land; but on high elevation we should not hesitate to plant peaches, expecting them to be a paying crop. They are liable to be injured by the severity of the winter. The bud of the peach is very sensitive to cold, especially after they have begun to expand. A warm spell in winter tends to expand the buds, after which they are very easily injured.

The next crop to come into bearing was dwarf pears. We had planted most largely of the Duchess, but had also quite a number of many other of the leading kinds. We found to our regret that the Duchess came into bearing very late, and was rather a shy bearer; and yet we have marketed several crops of the Duchess pear, and, on the whole, they have been profitable; but we are inclined to the opinion that in further plantings we shall not plant so largely of this variety, although it is a very large pear and sells well in market. The Anjou, Bartlett, Seckel, Sheldon, &c., we found much more reliable than the Duchess, bearing in seasons when the Duchess was a failure. It seemed to us that the seasons when the Duchess pear blossomed, was one in which heavy rain storms prevailed, which seemed to wash the pollen out of the flowers, after which the fruit dropped. Our Duchess, the present

year, are loaded down with fruit, as are almost all varieties. Taking our pears all in all we find them profitable, and hope for better results than we have yet secured.

Our plum trees came into bearing at a very early age, and we found them remarkably productive; indeed, the trees were in danger of breaking down with their loads of fruit. When the fruit is so closely crowded together there is danger of rotting, and when rotting begins it is necessary to remove every one or the rot will spread from one plum to another. The proper method would be, doubtless, to remove the surplus before they begin to rot, when the plums are very small. Our plums sold at paying prices. We gave the trees good culture, kept the soil well enriched, knowing that the plum, especially, requires rich soil. We found the Lombard one of the most productive of all plums, bearing at a very early age. The other varieties will bear at an older age; doubtless, but thus far have not equaled the Lombard, although there are many of them better in quality and of larger size.

Our cherry trees came into bearing at about the same time as the plums, but have not borne large crops until recent years. The past year has been the most successful cherry year that we have ever known, the fruit being largest size and most free from blemish and insect,

reminding me of the cherries of my boyhood.

There is a great chance for ingenuity in gathering cherries, as well as other fruits. Wagons on which broad racks or platforms are fixed can be driven under the trees, from which the pickers can pick fruit rapidly. There is no end to ingenuity in constructing wagons of this character. The racks can be made ten or twelve feet higher than the wagon-bed, if desired, so as to meet almost any emergency.

Our apple orchards have borne us several crops of nice fruit. They have paid us perhaps less profit than any other crop that we have grown, owing to the fact that they have not borne in seasons of scarcity, but have borne when the price was very low. There have been certain varieties, however, that bore fruit in off-years, which were exceedingly profitable.

My experience with large fruits teaches that they can be grown at a profit at very low prices. Indeed, I conclude that prices of the past have been too high in the average. If fruit growing is made a business, fruit can be grown very cheap. The trouble is that few make this a business, but attempt to sandwich it in with other enterprises, giving first attention to other affairs, to the neglect of the fruit interests. It is astonishing how many bushels of apples, pears or plums, etc., can be grown on an acre.



View of one Corner of Green's Nursery Farm near Rochester, N. Y.



## OUR RURAL AMUSEMENTS AND PASTIMES.

### CHAPTER VIII.

It is possible that our readers may assume that our fifteen years sojourn on the old farm were not years of pleasure. In one sense this assumption would be correct; in another it would be entirely erroneous. Notwithstanding a few privations, we enjoyed our sojourn exceedingly. Indeed, I never expect to enjoy any coming fifteen years more than I did those on the old farm. I attempted to study nature in her various moods. It is a very interesting study and the further one progresses the more he sees to enjoy. Every morning, every noon-time, every sunset has its peculiar charm to those who have learned how to appreciate such beauties. I kept a boat which I could place upon the wagon and ride to the river, or creek, or lakes, with my gun, alone or with companions; and thus I passed very many pleasant autumn days.

I had a passion for hunting and fishing, from boyhood. Thus, every season my gun and rod were a source of great delight. Not that there was an abundance of game in every direction, for there was not. If I met with game, I was grateful; if I found none, I enjoyed the tramp, and often seated myself upon a stump or fallen log for hours, enjoying the solitude of the forest or the rippling of the stream as it flowed past my feet.

I interested myself in the affairs of the little village near which we were located. This was a very small place, and yet I very much enjoyed the privileges of the church and the entertainments given by the various societies and the school, and private entertainments given at the neighboring houses. I very soon connected myself with the Y. M. C. A.; in fact, was one of the originators of that society. I became interested in the district school, and in the improvement of the highway. While these do not come strictly under the head of amusements, they were certainly pastimes and relieved what might otherwise have been monotonous years.

I took great pleasure in improving the country roads. Aside from other road work I once put fifteen men at work laying a deep tile drain in the centre of a low stretch of public

highway, with good results. I graveled, one load deep, from one to two miles of the public road at my own expense. I spent several hundred dollars in this manner, and I think with profit and credit to myself. There was a hill near the farm that required constant attention. I have made it the best hill road in the country. When we first saw this hill it was so gullied out with the rains it was not safe for a team to pass over it. Such hill roads are often a public nuisance. No one looks after them.

Every season, as soon as our fortunes would permit such an expenditure, we spent several weeks at Chautauqua Lake in Chautauqua County, New York. As our readers are doubtless aware, this is the headquarters of the Chautauqua educational movement. We greatly enjoyed our stay at Chautauqua Lake and can recommend to all of our readers this delightful spot with all its attractive associations. I know of no place where money can be spent to such good advantage, both for recreation and educational purposes, for old people and for children, as at Chautauqua. I had my boat sent to this lake and spent the morning and evening in rowing or fishing about the beautiful shores of this lake.

Later years, since it has been part of my work to help look after the affairs of the American Association of Nurserymen, I have traveled considerably. The Association meetings are held at different and widely separated localities each year, thus in attending them I have traveled somewhat. In addition, I have made it a part of my business to travel about from state to state in order to keep posted on the subject of valuable new fruits and other horticultural affairs. In 1889 I made an extended western trip, including California and other points on the Pacific Coast and the Northwest, that was highly profitable and enjoyable.

I consider the money I spent in traveling well invested and I propose to spend more in that manner at home and abroad. It is difficult to state how travel helps to educate and broaden us, but no one has doubts on the subject. Aside from the ordinary benefits of travel, I have been aided in a business sense by such vacations to a greater extent than the



Home of Chas. A. Green, Rochester, N. Y.

modest sums spent for car fare and hotel bills.

I very much enjoyed the game of base ball ; that is, seeing it played by amateurs or professionals ; therefore, I often witnessed the game at Chautauqua and at neighboring towns on occasions. I think this pleasure can be carried to excess ; but to those who love it, an occasional game is certainly an innocent means of passing away the time.

It is my opinion that we should cultivate tastes for many things, such as hunting, fishing, traveling, reading ; a taste for fine pictures or recitations, oratory. In fact, the more of these things that we can enjoy and appreciate, the more we will enjoy life.

The great need of rural districts is society. One great reason why ruralists are rushing into the cities is owing to the fact that they are secluded on their farms, completely cut off, in many instances, from their companions. Farmers are not a social class. They enjoy having good neighbors, but are so busy they very seldom visit one another. Hence it seems especially necessary for people living in the country to cultivate everything that tends to make the neighborhood more social. There is nothing that induces sociability more, in the country, than the church. I should not recommend any one to connect himself with a church solely for sociability, but I certainly should consider sociability a very prominent attraction. Rural people who attend church and who

belong to a church society and interest themselves in the church entertainments and the Sunday School will find this a great attraction to country life.

Country people pay too little attention to the district school, which is of no secondary account. The school is very seldom visited by the parents. The teacher feels that the people are not interested in the school ; he loses courage and enthusiasm. Any one can make country life more interesting by interesting himself in the district school. Accept the office of trustee when it is offered you. Do all you can to brush up, clean up, paper, paint and improve the surroundings of the school-house. Visit it often with your wife. Make a short speech occasionally, if called upon. Interest yourself in school entertainments. In other words, to enjoy rural life you must make the most of all the surroundings. There is too little in the country to amuse. There are not enough recreations there ; hence the necessity of making the most of such enterprises as the country does afford.

Under the head of amusements I must not neglect our morning and evening rides. Here is a method of amusement open to all ruralists ; and yet how few avail themselves of the privilege of a delightful evening ride after the work of the day is done. They say they are too tired ; while the fact is they become rested by a short ride. My wife has often expressed herself as very much refreshed and invigorated by



a ride of a mile or two in the evening, although when she stepped into the carriage she was quite weary. I have experienced the same feeling myself. The fresh air, the beautiful surroundings, the spirited motion of the horse and carriage, the singing of the birds, and beautiful sunsets, all tend to invigorate and lift one up above the annoyances and little fretful cares of life.

#### MY EXPERIENCE WITH APPRENTICES.

After our business had become pretty well known through the country we had numerous applications from young men and boys from remote parts of the country, who desired to engage with us as apprentices. We rather discouraged them on the start, telling them what they might expect in case they came to us. We told them all about the work—how part of their labors might seem to them of no special value in the way of instruction; that they might be called upon to do very many things that they already knew or cared very little about; that their pay must necessarily be small; and yet, notwithstanding these discouraging words they were very anxious to come. As a result we found ourselves at one time with two, and at another time four apprentices on our hands. As this was a time when we were practicing rigid economy, the apprentices were boarding at our own house and eating with us at our own table. As a rule we did not board our help and later years have not done so at all, but it seems to be the only method to pursue with these apprentices. The wages paid the best of our laborers at that time was thirty dollars per month, they to board themselves. These apprentices were to get ten dollars a month, we to board them. It cost us ten dollars a month to board the apprentices, therefore we were paying them twenty dollars per month, while the men who did full work and had experience earned thirty dollars per month; a difference of ten dollars in favor of the experienced men. This matter of ten dollars discrepancy in the wages of the apprentices utterly discouraged them and prevented their doing as well as they could or should. Whenever they were set at work at a job they began to talk among themselves and to think over their standing grievance, which was the reduced wages. They became at once disheartened and as a consequence the work had a tendency to progress slowly. Some of these apprentices were from foreign lands. They were in most instances sons of wealthy people, people of good social standing at home; indeed, in one case the parents were quite aristocratic and the son came with personal effects of considerable importance; such as wearing apparel and hunting equipments, numerous large trunks, etc.

Most of these young men were men of ability and well educated. Their object was not to earn money rapidly, but to get an experience in fruit growing, intending perhaps to follow it as their life work. We very soon

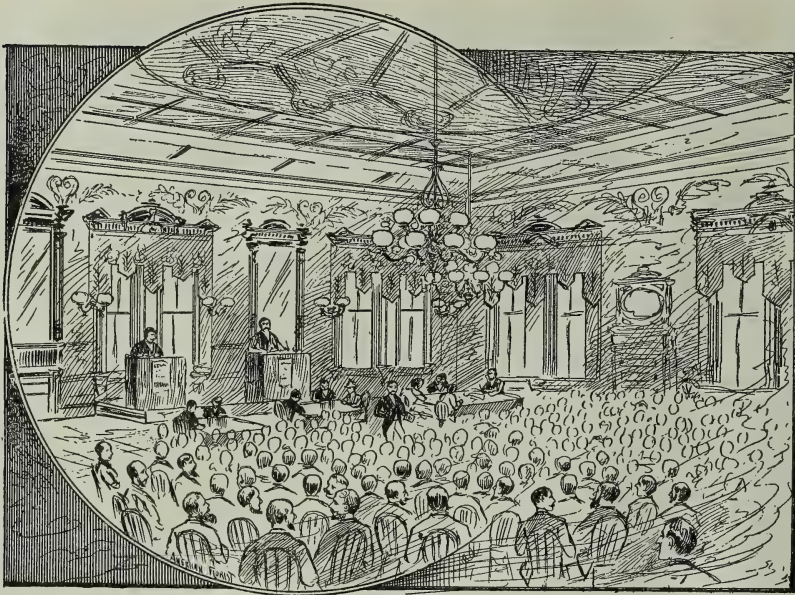
learned that they were dissatisfied. There was a tendency to find fault, not only with many things they ate but with many other things that more experienced people would scarcely have observed. This made it very unpleasant for us, as we had prided ourselves upon the pleasant relations of the hired help, generally; we could not remember ever having had angry words with one of our men. We have hired a large number in the past fifteen years, very many of them having remained with us during all of that time. They are, generally speaking, good men in every respect, moral men, active in work, reliable, honest.

It requires some ability to manage help and we prided ourselves upon having learned how to get along peaceably and pleasantly, making our men feel at home and feeling that life had something in it worth the living. But these apprentices we seemed not to be able to please in any way. They were up to tricks of various kinds, practical jokes, which, although amusing to them, no doubt, cut us to the heart.

When they first came, some of them knew scarcely anything about farm work. We, who are natural-born farmers, assume that everybody knows how to handle an axe or a saw or a hoe or a plow or a horse, but the actual fact is that people who know nothing about those things cannot handle a hoe or an axe. I have seen men who could not handle blocks of wood or understand or do the simplest thing that could be imagined, with any degree of intelligence. Why should they? They have never had any experience. They were intelligent young men in the direction in which they had been educated, but never had any experience in farm work they knew nothing about any department of it. I have employed men, who, when set to shovel dirt, would pitch it high over their heads into the air, coming down in showers over their heads and over their companions; when set at hoeing, would make the most outlandish motions with the hoe, often destroying valuable plants instead of weeds, not being able to distinguish one from the other.

Young men who have had no experience have to be taught everything, and yet the novice does not appreciate that he is inexperienced and thinks while he labors as hard as the others that he accomplishes just as much, which is a great mistake. We have men who are experts at using the hoe. They are just as skillful at whirling a hoe about a plant to remove every weed and still not injure the plant in the least, as a barber is with his razor or the surgeon with his lancet. While these skillful men do not appear to labor severely, they accomplish a big day's work with ease, while a novice, appearing to do very much more work and certainly making more effort, accomplishes very much less. Therefore, our experience with apprentices was, on the whole, discouraging.

We have since had many applications from all parts of the country, by young men, for



MEETING OF THE AMERICAN ASSOCIATION OF NURSERYMEN, AT CHICAGO, ILL.

work of this character, but we have not since engaged any. I cannot help thinking that the apprentices were very much benefited by their experience, and yet their feeling of dissatisfaction was so great as to make it exceedingly unpleasant for us. Our experience in boarding these apprentices was discouraging. The truth is I sympathize with any one who has to board either men or women, in the city or country, for money, for charity or for any other object. The home should be a secluded place. The home circle should be unbroken by any person, except occasional guests. The family need privacy. The family desires to be free to talk over family matters without having outsiders to listen to what is said. Then, again, the family circle should not be broken in upon by people whose early education, whose mental habits and manner of thinking and speaking are entirely different from those that you approve of. Not that all others are wrong and our household is correct, but we have the privilege of our own ideas, and everybody else the same. Further than this, boarders are fault-finding. No matter what abundance may be spread upon the table, the poorest laborer, who at home would live on the most miserable fare, will grumble. It is certainly a great mistake for farmers to board their hired help. We have discontinued the practice entirely and find that our men enjoy their home life much better and succeed better financially in boarding themselves. The fact

is that the wife of the laborer is compelled to keep house, to have the cook stove hot to do baking and boiling and washing and all kinds of cooking and it is very little more expense for her to cook for her husband at the same time that she is cooking for herself. Further than this, the wife of the laborer takes little pleasure in sitting down alone to a meal, or with her children, very much more enjoying having her husband opposite her at the table. Certainly it is the true method of home life for the laborer to board himself.

On the question of apprentices, I would rather encourage any young man who had an idea of pursuing fruit growing for a business, to spend some time as an apprentice in learning the needs and opportunities of the business. At the same time I should advise him to have great charity for the man for whom he is serving the apprenticeship, not expecting too much in the way of wages or instruction. Let him pitch his expectations on a modest basis and I think he will profit by the experience.

I would say this for our apprentices—they intended to be gentlemenly and courteous—they were not vicious. I do not doubt that they will distinguish themselves in whatever they may attempt. I could see latent ability in each. They have my best wishes for success. If only one had been employed at a time I am sure that our relations would have been more mutually agreeable. Some of them were particularly conscientious in their work.





Scene in the Orchard



Among the Grape Vines

## PECULIAR ENTERPRISES THAT MAY BE CONDUCTED ON A FARM.

### CHAPTER XIX.

It is generally understood that if one has to conduct a business he must seek the city, but I have found that many enterprises may be carried on successfully on the farm. Indeed, the country is a very desirable place for the beginning of any industry, for the reason that one can live there much more economically than in the city.

Expenses in the city are very much larger than in the country. The rent of a moderate, sized house and lot in the city would about equal that of a farm of a hundred to one hundred and fifty acres, including all the buildings, therefore, the matter of rent in the country is scarcely worth consideration, it is so trifling where one lives on a farm. Again, the matter of expense of dress in the country is nothing compared with that in the city. In the city we feel compelled to dress like our neighbors no matter how different our circumstances may be. In the city there are a thousand and one expenses, of street car fare and little outgoes, for groceries and vegetables and fruits, and many other items that are not met with in the country. If one has to hire help to carry on his enterprise this help can be secured much more cheaply in the country than in the city. Thus it will be seen that if it is possible to begin an enterprise in the country it can be done there with greater economy than in town. Why such industries are not more often begun on farms I am not able to state, except that enterprises of considerable importance are generally conducted by people living in cities. Such city people have had a thorough course of business training which fits them for these enterprises more successfully than such work as is conducted on the farm.

As the years went by it occurred to me that we could branch out in some enterprises that are usually conducted in cities, therefore, after a short residence on the farm we published the first issue of GREEN'S FRUIT GROWER,

This publication was printed at Rochester, twelve miles away. There was some inconvenience in being so far from the printer nevertheless, the paper was edited and published for ten years at the fruit farm, twelve miles away.

At the time the FRUIT GROWER was begun there was very few horticultural journals published in this country; indeed, the FRUIT GROWER may be considered a pioneer in its line. There was one other publication issued at Palmyra, New York; Thomas Neeham was publishing the *Horticulturist* at Philadelphia. These two were the only publications issued at the time the FRUIT GROWER was first published, that I can remember.

The first issue of the FRUIT GROWER received considerable attention at the hands of prominent horticulturists. I received letters of congratulation from Hon. Marshall P. Wilder, Charles Downing, John J. Thomas, F.M. Hexamer and other prominent men. These letters were full of encouragement and expressed the opinion that such a journal was needed at that time. It was a time when there was very little horticulture literature; not one-tenth as much as there is at the present day. Knowledge of fruit growing was very limited; every one was eager to learn. The FRUIT GROWER was remarkably successful from the first; it received early a large number of subscribers, and has gradually increased the number to the present time. At this date there are numerous publications of this kind in various parts of the country. Several have recently sprung up on the Pacific Coast, which give promise of usefulness.

Our early experience in publishing the FRUIT GROWER is somewhat amusing to look back upon. It seemed necessary to have the papers transported to our village by stage. I remember the first spring that the roads were rendered impassable by the melting of snowbanks, and the only way left for us to transport these heavy packages from the stage to our farm,—about a mile and a half,—was on our backs. One night the whole force of our fruit farm



might have been seen, each with an immense roll of FRUIT GROWERS on his back, marching through the field in promiscuous order, the roads not being passable even for foot passengers.

#### A NURSERY BUSINESS ESTABLISHED.

When we first went to the farm we had little idea as to what business we should conduct there. It occurred to us subsequently, owing to the demand upon us from our neighbors and friends for strawberry and other plants, that it would be possible to issue a list of such as we had for sale. We also found a demand among our neighbors for trees of various kinds, to a limited extent, therefore, we included a few of these.

At first we simply issued a small price list on a very small sheet, a very modest affair as you can imagine. We not only distributed these to our neighbors but to our friends and acquaintances in different parts of the country, to the extent of perhaps five hundred. This small sheet was enlarged year by year until it assumed the shape of a presentable catalogue.

Business did not come with a rush. It is well that it was so. All enterprises must have a small beginning. We know of business houses that are doing immense business, taking in the entire world, and we are apt to imagine that their business was always as large. If we could examine into the history of these large business houses we should find that in the beginning they started in a very modest manner. This is the history of ninety-nine one hundredths of all the large business establishments of the world.

Suppose it were otherwise; suppose when the young man starts out in business he should receive as many orders as though he had been in business thirty or forty years; the result would be that he would not know what to do with such an immense business. He would not have the experience in handling stock or in producing, or in any regard; he would be inexperienced and entirely unfitted for the work. It is necessary that he should have experience in

handling a smaller business; this smaller business gradually increasing, gives the proprietor larger experience year by year until he can handle successfully the enormous business which eventually comes, providing he serves his patrons well and honestly, and to the best of his ability.

This was our experience. We began business under the firm name of Green's Nursery Company. We were surprised each year by the steady increase of the business, which amounted to fully twenty-five per cent. increase every year. Thus if in one year we sold, in our early

experience, ten thousand dollars worth of stock, the next year we would sell twelve thousand five hundred dollars worth, and so on increasing each succeeding year one-fourth.

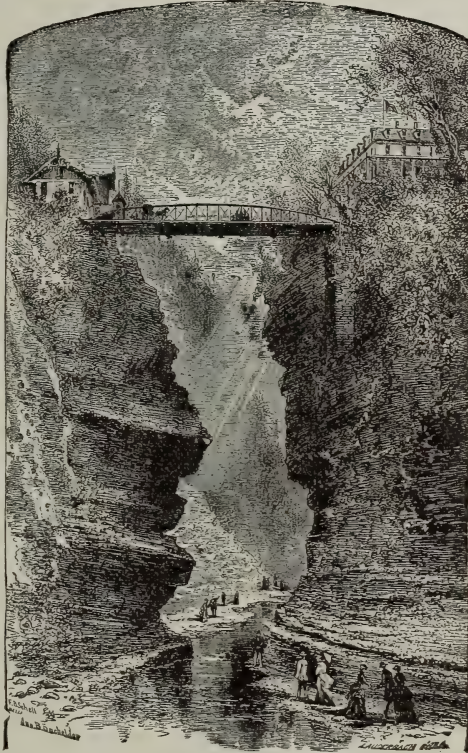
As the reader can see, this steady increase soon led up to a very prosperous business, taking in the entire country with many orders from foreign countries. This branch of our business was an outgrowth of the fruit business, therefore we give the fruit growing industry entire credit for all of our success.

#### A PROFITABLE BUSINESS RECOMMENDED.

I am often asked by young men what I can recommend as a profitable pursuit for them to follow. As these young men are most largely farmers' boys, I recommend them to grow fruit and to learn to propagate the

young plants from the strawberry, the raspberry, the currant and gooseberry. They should learn to do this in a very small way, the same as we did. If they make mistakes, they will be trifling mistakes which will not be serious in any sense. They should not expect to get numerous or large orders at the start.

People do not trust new men in the business, whose honesty and integrity have not been tested. The public have been deceived too often by dishonest propagators and nurserymen to trust strangers largely; therefore, the early orders of such young men will be small, but if these early orders are filled true to name, and in



WATKINS GLEN. (See page 35.)

the best possible manner, with superior plants, the patrons will enlarge their orders as their confidence increases.

No one should commence this business unless he expects to make it a life work, for the reason that every year's work increases the prospect of future rewards. In advertising, whether by catalogue or by newspapers, that which is done this year will help business for many years to come.

The rewards are not remarkable in this line of business, but to him who has patience the opportunities for advancement are good. At the same time all cannot hope for the same success. They are comparatively few who are endowed by nature with business ability. Some are financiers naturally; some are not. It requires more ability to manage a plant business or even a fruit business than to conduct farming, hence the advisability of beginning in a small way to learn what your capacity is for such enterprises.

One might hesitate and say to himself that there have been so many frauds and deceptions by nursery agents that it would discourage them in attempting to build up a reputation. One might feel that the public had been deceived so many times in the purchase of trees and plants that were not true to name, that they would not trust any one again. This is not the case. The rascality practiced by dishonest agents in the nursery business simply tends to increase the business of those who are honest, and aim to do right, and who serve their patrons to the best of their ability. Such honest nurserymen must in time secure a reputation for their nursery, and such a reputation extending all over the country, is a fortune to any one.

#### HOW DID WE MAKE THE OLD FARM PAY.

In summing up the whole matter, as to profits on the old farm, we give credit first and foremost to fruit growing as the basis of all our success. My opinion is that fruit growing to the majority of people is more profitable than the nursery business, or than the publishing of any paper. There is no business for rural people so profitable, in my estimation, as the growing of choice fruits by intelligent and well informed men who make that their business and who aim to be thoroughly informed along that line. It is not only profitable in itself but every tree a man plants on his farm adds to the value of that farm.

Is not this plain to every one? Take for instance a farm of one hundred acres without any trees upon it. Such a farm may furnish an income of say one thousand dollars to the

owner each year. This same farm devoted entirely to fruit culture, with orchards of apples, pear, plum, cherry, fields of grapes, raspberry, strawberry, currant and gooseberry, should bring to the owner an annual income of \$5,000 or five times the amount that would be secured by farming.

Again, notice how attractive the farm has been made by these orchards and vineyards and berry fields. Observe how much pleasanter such a farm is for a family to live upon than one almost entirely barren of such luxuries. Is it not clear that there is no use to which a farm can be put that is so desirable, so attractive and so profitable as fruit culture?

Nevertheless, I should very much dislike to exaggerate the prospects of profits from fruit culture. It is not well for a fruit grower to begin fruit growing with expectations of great profits. There are drawbacks in fruit growing as in all other business. My advice is to plant fruits expecting better rewards than from farming. This can certainly be relied upon, providing you understand the business.

When we first began the nursery business we received a small order from a man in the state of Maine. This man's name and the circumstances regarding his order made an impression upon our minds, owing to the fact that he was the first man who ever sent us an order from a distance. It is a pleasure for us to notice that he has continued to be a patron ever since. We have very many similar patrons throughout the country. It should be the aim of every one starting as we started, to treat every patron so that he shall not only always continue a patron but that he shall induce many others to become patrons. This is the foundation rock on which all business enterprises should be built.

When I first began my nursery work I had much to learn; I made it a point to instruct myself in all the details of nursery work. Thus in my early experience I remained in the fields budding, grafting, pruning, planting, or in fitting the ground and laying out plans in general. This was a wise course, undoubtedly. No one is competent to manage a large business unless he knows all the details of the work.

I publish these experiences hoping they will be instructive to many who are starting in similar pursuits. I do not expect that others will follow exactly in my footsteps, but there is an open field in similar lines to those I have followed which would seem to offer inducements to enterprising, industrious men.



## Story of the Weeds.



One day some seeds, that my father had plowed under fifty years before, found themselves turned up by the ploughshare where they could feel the warm sunshine. They were so happy they burst their sides with laughter, and sprouted up thick and fast. Finding them in the field

which had been previously engaged by the raspberries, for their own special and undivided use, I started the cultivator rooting them up right and left, and burying many more. "What a shame," cried the weeds, "to fight us thus in our infancy, before we have harmed you. You should wait until we are big enough to defend ourselves. Take somebody of your own size, can't you?"

Later in the season I found the weeds crowding lustily under the shade of the berries. Again I set the cultivator at work. "Ha, ha, ha!" screamed the weeds, "you can't hurt us now. Our big roots have grasped the soil firmly. If you dislodge us we will take fresh root and begin again, and if you kill a few our seeds will spring up and take revenge. Scrape away, old fellow, we rather enjoy it."

As the fall frosts began to gather, and the weeds had folded their doors for a snug winter, I again found them camped about in social communities. Now my turn had come. "Get out," says I, "or I will put you out. I have endured your intrusions long enough. You have robbed my plants of their food and water, you have made nesting places for mice, you have caught in my clothes and filled the tails of my horses. You have reigned supreme in this farm for a generation. Now your kingdom has fallen. I will have no more of you. Scatter, expire, vanish." But they only chuckled in their tents, for they had often heard such talk before, and the previous proprietor did not think it worth while to molest them at this late season, thinking they had done their worst. "Ho, you, Tom, Jack and Jerry, bring out the great winged shovel-ploughs. Hitch to each the strongest horse; run through those rows until every weed is uprooted." Forthwith I heard the steel shares grinding in the soil. The battle had begun. Then came the

groans and shrieks of the dead and dying. Thousands upon thousands perished upon that bloody field. "Give us quarter," shouted a big weed that had hid himself in vain close by a plant, "would you slaughter us in cold blood after all our struggles, when the winter is at hand and we cannot work to replace your mutilations? When the frost will bite us, exposed and naked, and leave us dead as the stubble?" But the end had come, and he fell with his companions in one common tomb.

## HOW TO PROPAGATE.

### General Rules.



Everybody should learn how to propagate fruits. When you buy a rare plant for your garden you may increase it to a hundred in a short time by giving it a little attention, and if you do not desire the increase yourself you can do your friends a favor by placing such gems in their garden. The professional fruit grower especially needs all possible information on this subject. His success depends on his having the improved varieties, and as he can get a large supply at an early date by rapidly multiplying them, he should ever be on the alert. When a new variety is introduced, we have often heard people say, "When the price gets low, I will buy." But the price usually keeps up for two or three years. Now supposing it is a new red raspberry, and you buy one plant for one dollar when first offered. You plant in the richest soil possible, manure and nurse it, and the next season you have fifty—you might possibly get a hundred—but say fifty plants. These you plant in the same way, and the second year you have two thousand five hundred, worth probably, at the price usual two years after it is introduced, \$50 to \$100—a

NOTE.—The author desires to give credit to the *Rural New Yorker* for three cuts of grafting the grape, furnished at our expense. To the *New York Tribune* for the "Boy on the Farm," "How Farmers May Begin," and about budding, said articles having been written by the author for the *Tribune*. To Mr. J. Jenkins, Winoni, Ohio, for cuts of budding and grafting, etc., furnished at our expense, from his valuable work, "The Art of Propagation." To Saunders' "Insects Injurious to Fruits," for cut on page 26. In the *PORTFOLIO* are given some "waifs of the press."

## PROPAGATING THE RASPBERRY.

good investment, certainly. But farther than this, it is a great pleasure to have these new things of great promise, to watch over and care for them, even though you get disappointed at times, as you assuredly will.

1. Remember that you should plant on rich soil for propagation. A cutting has no roots to send out to a distance for food, and must have it near at hand. More than this, rich soil is more moist than poor, and more porous.

2. Make the soil deep and fine. Hard clay soil that bakes will not answer, unless sand or muck is mixed with it liberally.

3. Plant and cultivate with care, and give frequent attention. You seldom find a successful propagator with a propagating bed in the further corner of his grounds. Why? He wants it near by, where he will be reminded of its needs.

4. When about to propagate, investigate thoroughly and learn what varieties are most worthy. Do not waste your time on worthless varieties. Get a specimen bearing fruit on your place as early as possible, and judge by its conduct there whether it will be profitable for you to largely multiply it.

5. The profits of propagation are great. From an acre you might realize \$1,000 or more. In propagating some species the labor also is great. Consider that at the start, and do not expect large profits from small outlay of time and attention.

6. Plant and care for your propagating beds in the best possible manner. It does not pay to neglect anything, but least of all a propagating bed. What I have learned about propagation has been from experience. I have met with many failures before learning the best methods. I know that all the books I shall sell will never cover the losses I have sustained to make me competent to give the advice I do in this little work.

### Propagating the Strawberry.



It is possible to grow 500 to 1000 plants

from one vigorous strawberry plant in one season. When you have a valuable but scarce variety that you wish to increase rapidly plant in a bed deeply trenched, and enriched the year previously with all the manure that can be well mixed thereon. Set the plants from four to six feet apart each way. Work the soil about them frequently, but not deep. When the first runners appear remove them. As the plant gains strength permit runners to remain, and draw them out in different directions from the parent plant, laying a small stone over each where the leaves appear. Continue this course, watering in time of drouth with diluted liquid manure. Soil so rich as this is not desirable for producing fruit, but is just the thing for increasing plants. Newly manured soil is not in condition for forcing plants. It must first become rotted and incorporated with the soil. Then it becomes plant food and not before. Fresh manure often prevents plants from growing when placed where the roots come in contact with it. Such manure should be used as a mulch, when it accomplishes a double purpose—keeping the soil cool and moist, and furnishing plant food by leaching after rains.

### Propagating Black Raspberries.



Raspberry plant with tips layered.

Next to strawberries these are the easiest of all to propagate, yet many do not know how to proceed. I have known people to layer the canes at intervals as they would the grape, leaving the tip uncovered. These people could learn from the wild plants in the woods, which bend over and drop the tip in the loose soil, where it takes root and produces a new plant. Plants would take root often unaided in the planted field were it not for the wind, which sways them about and destroys the vitality of the tips. We have known whole plantations to be lost for propagation by a heavy wind previous to layering. If such a wind comes very early (which seldom occurs) the tips will send out new buds and take



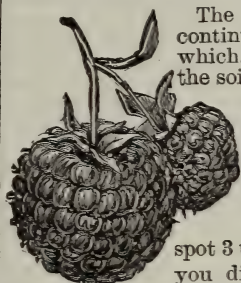
## PROPAGATING THE RASPBERRY.

root. But if the season is well advanced into late September, it is useless to spend time with them.

The old rule is not to layer tips until they turn red, are swollen and look snakish. Such a condition is indeed desirable, but the propagator who would wait for such maturity would succeed in obtaining only half as many plants as he who began as soon as the canes were long enough to bend over and reach the earth. Why? From the fact that if layered early (before the cane has grown long), the cane, instead of continuing to extend itself, often from ten to fourteen feet, which is a waste of vitality, will send out new branches, which can, in turn, be layered later. I begin to layer very soon after the berry harvest is over, often at once. First put the soil in fine condition by repeated cultivation (for the pickers have made foot-paths all about), then, with a garden trowel, make a hole two to three inches deep, hold in the tip as nearly perpendicular as you can (if laid flat it will invariably push out and not take root), fill up the hole, pressing it firmly, if very dry. Tips put in with light covering make the best plants, but the wind is apt to twist them out. A good man or boy will put in from 1000 to 4000 in a day in this manner, depending on the looseness of the soil and number of tips per bush. I often have thirty men and boys at this work, going over the fields three or four times, at intervals of about two weeks. The earlier tips are put in the larger the plants are. If the weather is excessively hot and the tips very immature, they sometimes scald or turn black and die, but we have never met with any serious loss in this respect, and would not delay an hour on this account. Of course the lower the bushes are headed the earlier they can be laid, thus we cut off the young canes when twelve to eighteen inches high, which occurs often before blossoming. By trimming closely, after digging plants, the canes support themselves and bear fine crops of fruit. Does this crop of young plants, often forty or fifty exhaust the vitality of the parent plant? Yes, it has such a tendency. Propagating plants should have better care and more fertilizing than those that bear fruit only. By nipping the tip of canes early and often, and making the soil very rich, it is possible to get 100 plants from one the first season planted. The richer the soil the larger the plants and the greater number. The young plants are usually left where they grow until the winter is over. If to be planted on your own place it is better to plant them in the spring, after they have sent up a green shoot two inches high. Raspberry and strawberry roots are quickly destroyed, if exposed to a hot sun or drying wind; ten minutes' exposure will often sap their vitality. If you propagate blackcap tips on low, wet soil, they will be heaved out by frost, unless covered with strawy

litter. Hasty people plow furrows for tips, and use plow or shovel to cover them. It does not pay to follow this method.

### Propagating Red Raspberries.



The roots of this class continually form buds, which, pushing up through the soil, form sucker plants—some varieties form few, some many. If you plant a choice variety in the spring, in good soil, its roots will probably cover a spot 3 to 4 feet across. If you dig the parent plant the next spring, be careful to cut the roots close to the cane so as to leave as many roots in the soil as possible, and undisturbed. The strength of the roots remaining in the soil, instead of nourishing the parent will bud rapidly and furnish an amazing supply of strong plants—40 to 100 in many instances. If the soil is mulched with rotten manure it will make it easier for the young plants to push upwards as well as give them food. You can cut off the lateral roots of the parent plant and permit it to remain if you wish, but it will do better elsewhere, and will have another bed of roots formed by another spring. I prefer not to disturb the plant until spring, as root growth often continues during winter, and the young germs are safer attached to the parent plant until spring.

If you are a skilful propagator, and have a green-house, you will take up all the roots you can with the plant, cut them in one-half inch pieces and start them with bottom heat, in boxes of sand. As soon as buds appear on the roots they are placed in shallow boxes filled with about three inches of good soil, mixed with leaf mould. When the plants have grown a few inches above the soil they may be potted or transplanted at once in out-door beds or fields. Similar treatment may be given in hot-beds and cold frames, but such methods require close attention and considerable experience, and the novice will often do better not to attempt them. Gardeners succeed by simply cutting the roots into two-inch pieces and planting shallow in rows in garden beds, covering with sand or mulch that will enable the young germs to push through easily. These require careful weeding and hoeing, but if they get a good start make fine plants by fall. If you have a valuable variety on your place and wish to extend your plantation you can do so by transplanting green plants, suckers that spring up where plants were set the spring previous. We have succeeded best by permitting these green plants to get of considerable size, say six to ten inches, before trans

planting; then, nipping the tender tops and many of the leaves. Then the wood has hardened, the roots have multiplied, and the plant has a better chance to live than if dug when young and tender, with feeble roots. If I could have learned this by other experience than my own, I should have saved \$1,000 at least. In fact, much information that I give in these pages has cost me large sums of money. I once had a few plants of a valuable new red raspberry that I desired to propagate as fast as possible. I dug up part of the roots and placed them under glass, thinking if they grew well to do likewise with the remainder, but if they seemed liable to fail I would permit the balance to propagate themselves where they grew. Well the plants under glass grew amazingly. I was delighted and of course dug up all and placed with them over artificial heat. But after a time all began to grow smaller, then some withered, and all looked feeble. Every method was attempted to revive them, without avail, and the whole enterprise I regarded a failure. If I had left the roots in the soil where they grew, as first recommended here, I would have secured more and better plants. The few pot house plants that lived did not take kindly to transplanting in the open field, to fight the wind and sunshine. Then I have planted hot house plants when too small, earlier in the season, according to rules, desiring to avail myself of fine rains. But the season proved late and wet, frosts fell upon the tender shoots, worms gnawed into them, some rotted, some were eaten by grubs, more became discouraged by the cold weather that kept nipping their noses, thus when the warm-growing weather came, previous to which they should not have been planted, most of my pets had departed to that bourne from which no traveler returns.

In planting red raspberries for propagation remember that if set in rows seven feet apart the roots will meet in two years, and by the third cover the entire surface. Thus in planting the Marlboro I set them in rows seven feet apart, planting potatoes between the first year. The second year I will have barely room to run a cultivator between the rows. What would I have done if planted three feet apart? When planting for fruit I plant four feet apart each way and cultivate with horse both ways. Remember that some kinds of red and yellow raspberries propagate only from tips. The drooping tendency of the canes indicate this peculiar propensity.

### Propagation of Blackberries.

The blackberry is propagated much like the red raspberry, therefore I need not go into details. It takes the blackberry longer to become established than raspberries, but



having once gained a foothold it endures for a long time in the same patch with profit. One season's growth of root is not sufficient for the best success in propagating, as it is with the raspberry. Two years' growth should be given before the parent plant is dug up for propagation. But the spring after one season's growth you can sever

the roots one foot distant from the plant by thrusting down a sharp spade and withdrawing it with the least disturbance of the soil possible. Then there will be roots enough left undisturbed on the plant to push forward a good growth of new roots, and the severed roots will sprout up and make fine plants. But the second year you can remove the parent plant and the roots from eighteen inches about it and then there will be enough roots left in the soil to make a good stand of plants. Cut the roots into pieces two inches or more long, depending on the size. Do not cut too short. Nothing is gained, for if left long, two plants will probably be formed, and if too short, perhaps none. The smaller the root the longer it should be cut. We generally cut the roots in the fall, storing in boxes of sand in the cellar, but they may be cut in the spring with nearly equal success. Scatter the roots in shallow trenches six inches wide as early in the spring as the soil will work and cover with two inches of loose soil. If a sprinkling of rotten manure is strewn over the rows after this it will avail much. Keep them well wed or failure is certain. Usually strong plants are made by fall, and in digging these you can leave detached roots in the soil to spring up and renew the row. The parent plant, after removing most of the roots, may be planted in a new bed. In green-houses very small pieces of roots make good plants, the same as with red raspberries. The more you spade among a patch of blackberries the more suckers will spring up. Therefore, if you have a field designed for fruit do not dig plants therein. There are kinds of trailing blackberries that do not propagate from the root, but from tips like black raspberries.

### Propagating Currants.

Few cuttings take root so rapidly as the currant. I cut the wood of the present season's growth as soon as the leaves begin to fall, often stripping the leaves by hand. I then cut the wood into cuttings seven to eight inches long, tie in bundles of fifty, lay them in a trench with the *butt end up* and cover with two inches of fine soil over



## CURRENTS AND GOOSEBERRIES.



the butts. This being done the last of August when the earth is warm, the cuttings will callus over and send out roots in from ten to twenty days. I often find the cuttings so well rooted it requires some pulling to get them apart at planting. I plant when I get time in the fall, often in November, in rows three feet apart. I thrust down a spade to its full depth, sway is backwards and forwards, making quite a hole, then withdraw it and a boy slips in two cuttings, one at each side of the hole. We progress in this way until the end of the row is reached. I then turn back and both tread the earth as compactly as possible on each side of the cuttings, sinking our heels down hard. This treading is very important work in planting all cuttings, as it is no easy matter to compact the earth to the depth of a foot from the surface. When the field is planted thus we run a shovel plow between the rows, being careful to throw the soil as near the cuttings as possible and not cover them, the tip end of each being now exposed. This leaves a ridge on each side of the row of cuttings, with a

hollow in the line of the cuttings. This hollow we fill at once with fresh straw horse manure, thick enough to hide the cuttings completely. If the furrow is not deep I go through the second time with shovel plow after manuring. The ditch made by the shovel plow lets the water pass off, and the manure covering prevents heaving by frost, and stimulates growth so as to secure the best possible plant one year from planting. If currant bushes are earthed up a foot or more in June, roots will be formed about the base of the branches. New varieties are often propagated in this way. The rooted layers are removed, permitting the parent plant to remain.

### Propagating Gooseberries.

Gooseberry cuttings do not easily make roots, therefore the bushes are usually layered in July. The young wood of the present season's growth, when immature, takes root readily, therefore as soon as growth enough has been made the layering should begin. They are usually banked up as high as possible in order to cover the new growth in part. In order to accomplish this most effectually I sometimes bend the branches down flat to the earth and cover all but the tips. By fall the whole plant will be a mass of roots, which should then be divided—every piece that has a root, no matter how small the root, planted as recommended for currants and covered with manure and shovel plowed. I have seen old bushes layered, not expecting the old wood to take root there, but to so soften the wood that it might more easily take root the next season when planted like cuttings.

### Propagating the Grape.

It must be remembered that there are varieties of fruits that are much more difficult to propagate than others. This is the case with raspberries, gooseberries, etc., and especially with the grape, on some varieties of which it is almost impossible to secure good roots. But the larger number root freely from layers or cuttings. Layering is the most simple method, by which any one may succeed. This is done most readily with the young green wood by burying it in June in the soil three inches deep at intervals, often thus securing many plants from each vine. Last season's canes

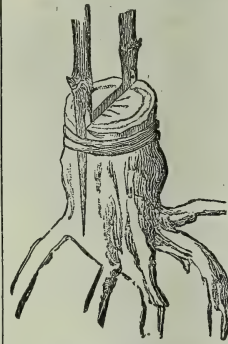


SPROUTS GROWING UP FROM LAYERED CANE.

## PROPAGATING THE GRAPE.

can also be layered early in the Spring. Stretch the cane in a shallow trench and fasten it there with wooden pins. Do not cover it with earth until the buds open and the young shoots get several inches high, then gradually cover until four inches deep, placing a stake where each green shoot springs forth, each of which will make a well-rooted vine. Layering is a heavy draft on the vine, thus we seldom layer the first season, knowing it would weaken the vine. It should be layered sparingly until well established, unless some sturdy kind like Concord or Champion. Layers that are poorly rooted are planted in nursery rows one season. Nurserymen always cut off a large part of the roots of vines at transplanting. This gives more fibrous roots, the vines plant easier and grow equally well. There are numerous methods for preparing grapes from cuttings, the most frequent being from two or three-eyed

the vineyard. Cleft grafting is usually adopted for such vines. The cane is first

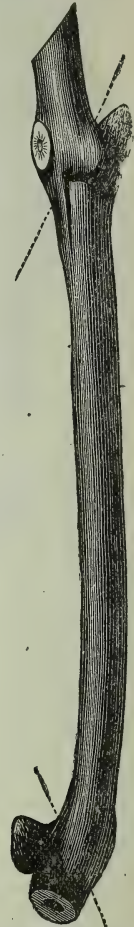


Cleft graft of grape.

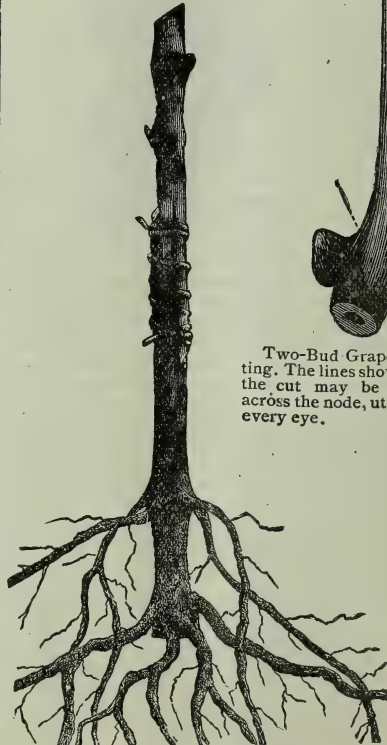


Cane laid down.

cuttings, each about eight inches long; planted simply by thrusting in the spade (no shoveling out trenches), in carefully prepared beds, in rows twenty inches apart, three inches apart in the rows, all firmly trod with the feet, then mulched with leaves, rotten tan bark, saw dust, cut straw, etc. There are soils so well adapted it is possible to succeed without a mulch, but such soils are rare—in all cases the mulch gives the larger percentage of good rooted vines. As I look back upon my experience I find my best luck to be always with the mulched. A few propagate entirely from one-eye cuttings out doors. The wood is cut an inch above the eye and left as long as possible and yet have only one eye—simply a short peg with an eye near the top. These are simply thrust in a narrow bed closely, in rows a foot apart, and at once covered with three inches of *seasoned* tan bark—when first removed from the tannery it is not so safe. Few weeds came up through this heavy mulch, but the grapes push up readily. Many varieties grow well by this method, while others are scattering, only here and there a plant, but with new varieties there is a great gain in getting double the number of cuttings. Under glass nurserymen propagate from single eyes cut from two to three inches long, started in shallow boxes of sand, and afterwards potted or transplanted in beds. A good way to increase a valuable variety is to graft single eye cuttings on grape roots and plant in the usual way. Grafting is now practiced more largely than ever before, principally on established vines in



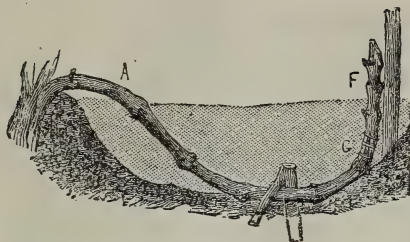
Two-Bud Grape Cutting. The lines show how the cut may be made across the node, utilizing every eye.



Whip graft on section of grape root.



## PROPAGATING THE GRAPE.

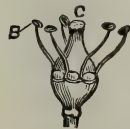


Grafted Cane of Grape

cut off three to four inches below the surface of the soil, then the stump is split with some thin sharp implement, extending the cleft about two inches. The cleft is held open with a narrow wedge in the middle of the cleft. The scion may have one eye or several, but should not be over six inches long. Sharpen it with a keen-edged knife so as to fit the cleft standing open before you, permitting the outer edge to be thicker than the inner, that it may press more closely at the vital part, where the inner bark of both stock and scion meet. Insert it carefully and withdraw the wedge. If the stock is large another graft may be inserted in the other side of the cleft. Bind firmly with stout twine, covering this with a few twists of wire. The string alone would rot, but it prevents the wire from cutting the vine. Then cover the graft with a mixture of four parts of stiff clay with one part of fresh cow dung. For grafting grape roots whip grafting is adopted. Take a yearling Concord vine, or any cheap vine for this purpose. If the roots spring from several eyes one vine will make several roots for grafting. This work can be done during Winter if the vines used for stocks are stored in the cellar. Pack away in sand the same as apple grafts.

If you desire to cross one variety with another to produce seed presumed to inherit the characteristics of each parent, cut the anthers from the stamens with pointed shears before the pollen is shed, when the flowers first open as shown in the cut. As the flower becomes developed, apply the pollen from the flower of the variety you desire to use to the pistil "C." To avoid impregnation by insects or winds carrying pollen, cover the flowers to be impregnated with thin oiled paper or cloth. G. W. Campbell says the grape blossom must be opened artificially before its season of flowering, for the removal of the anthers.

Grape Flower.  
C, pistil, B, anthers.



Grape Flower.  
D, stamens with anthers removed.

The above cut shows the graft on a strong cane layered in the earth. By this method the parent vine is but little interfered with in case the graft fails to succeed. But the cleft graft is generally used where varieties



Inarching. The dotted lines below show where the new variety is cut off and removed after the union is perfected, and above where the wild vine is severed.

of a vineyard are changed. It is not regarded as difficult, but I advise experimenting in a small way at first.

Green wood cuttings are mostly started under glass. Inarching is performed on green or ripe wood by planting the vines side by side, or by placing one in a pot or

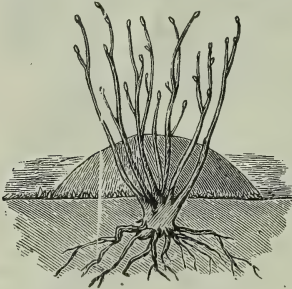


Green Wood Grape Cutting.

box. The two canes are simply bound together after taking a slice of wood from each, and bringing the exposed layers of bark closely together. If connected something like a whip graft it succeeds better. The wounded part should be bound with moss or clay. After the vines have grown together detach the portions not desired.

### Propagating the Quince.

Usually the quince is cut back after it becomes well established, that it may form numerous young shoots near the base. The



Stool Layering of the Quince.

bush is then earthed up a foot or more in June. By fall the branches will have formed numerous roots and may be removed and planted in nursery rows where they soon make fine trees. By maturing and nursing a crop of layers may be taken every other year from the same stool. Plants may be formed by bending



Plant Layer.

down a branch and covering a part with earth. With rare varieties we import from France the Angers Quinces which cost \$15 per 1,000, plant them and bud with the rare variety. This is the most rapid method and makes the finest trees, as the Angers possesses great vigor. We often graft cuttings of the quince on short pieces of apple roots. The apple root sustains the cutting until it forms roots of its own. All these methods preserve the identity of the variety—but if seed is sown no one can tell what kind of quince may be produced. The quince does not root readily from cuttings, yet a few people meet with good success by this method. Make the cuttings long, and prepare them in the fall, planting very early in the spring.

### Propagating the Peach, Apricot and Nectarine.

We class these together as all are worked on peach stocks by the same method. Natural peach seed is used by the best nurserymen from trees never budded, coming from Tennessee. These are less liable to yellows than seed grown North. Whatever kind you use prepare in the fall by mixing the seed with sand and exposing them to the frost and storms all winter. This loosens the cement that binds the pits and they open readily in the spring without cracking. Sow these in beds or drills very early, covering but lightly with sandy soil. When the plants become four inches high transplant on a cloudy day to nursery rows three and one-half feet apart, six inches apart in the rows. About the first of September bud them. Next spring cut the tree back just above the bud that you have set, and break or rub off all other buds that appear, except this one that you desire. By fall this single bud will grow from three to six feet high and form a splendid tree.

### Propagating the Cherry and Plum.



The seeds of these are treated much like those of the peach. Seedlings are usually bought at \$6 to \$8 per 1,000, as the growing of these, also pear and apple seedlings is a business of itself. The largest seedlings are secured and planted eight inches by three and one-half feet, generally by thrusting in the spade as recommended for planting currant cuttings, but the safer method is to open a trench, but it requires more labor. The highest culture is given. As the plum drops its leaves early it is budded first—in July. The wood of the cherry must not be too sappy, thus budding is deferred until very rapid growth is past, say the first of August here. The after-treatment is the



## PROPAGATING THE PEAR AND APPLE.

same as for the peach, except that it takes at least two years to get a well-branched cherry tree. Cherry and plum buds give us more trouble than any other. They do not always grow. Sometimes half the cherry trees must be dug up and thrown away after attempting to make buds catch by repeated budding. A small black insect often besieges the leaves of the young cherry and ruins the tree unless destroyed by dipping the branches in tobacco water diluted. A friend picks off the infested leaves and burns them. Cherries and plums are sometimes grafted on pieces of cherry or plum roots, but they seldom succeed by this method.

### Propagating the Pear.

Pear seed is expensive and the novice should be contented to purchase pear seedlings one year old, strong, and plant eight inches by three and one-half feet. All nursery ground should be well drained and fertilized, and put in the finest possible condition before planting. Pear roots are the most sensitive of all roots, and require careful planting and every possible attention. The leaves of pear trees are subject to blight, especially on American seedlings. Those imported from France are less subject to leaf blight. To be safe against blight (which renders budding impossible by tightening the bark), the pear is budded early in July, as soon as mature buds can be secured. The pear may be grafted on pear roots, but budding is much safer.

### Propagating the Apple.

Any person can grow apple seedlings. Get pomace from the cider-mill the moment it comes from the press. If it heats it is ruined. Open trenches in well prepared soil with a shovel plow three feet apart. Scatter the pomace thickly therein. Then run the shovel plow between each row, thus covering the pomace very lightly. If you spread rotted manure along the

rows, or ashes, it will avail much. Do not be afraid of getting in too much seed—you can thin the rows with a garden rake when the plants first come up, if too thick. Some say the pomace sours the soil. Do not believe this. It is even better than cleaned seed on heavy soil, as the straw mixed with it keeps the soil porous, permitting the young plants to come up easily, and you avoid the risk of soaking the dry seed. Dig the seedlings the first succeeding fall, sorting out the larger ones. These may be root grafted, cutting the roots into pieces about three inches long. The smaller ones may be planted and budded. If not large enough the first year they may be budded the next. We only use the best. The after-treatment is the same as before described. Root grafting is done in the winter, the grafted roots being packed in moist sand. The budding may be done any time from August 20th to October.

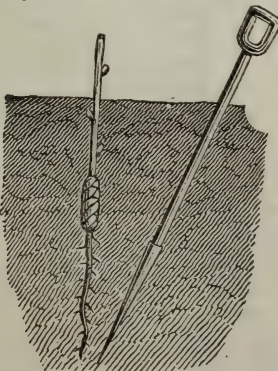
### Propagation by Cutting.

Mr. J. Jenkins says: Most varieties of Grape-vines, Currants, Gooseberries, Roses, and much of the shrubbery supplied by nurserymen, grow readily, and are grown from out-door cuttings. Whether of trees or vines, in-door or out-door propagation, the operation of nature in the growth of the cutting is the same. The bud holds within its brown envelope the principle of life, which extends through the cells that have carried the circulation, extended the growth, and established the bud. After the cutting is divided, nature's first effort is to form a callus with the descending cells that would have gone to extend and enlarge the roots on the mother vine.

If instead of abruptly dividing the cane or shoot to be used as a cutting, a system of ringing or strangulation be followed, every bud may be made to produce a plant. This strangulation or ringing is performed on soft or green wood by tying thread tightly around the point where the cutting is to be separated, and on hard wood by a ring of copper wire drawn closely. This will cause an enlargement and a deposition of cambium at the point of arrest and make the growth of the cutting thus prepared, when finely separated and planted, almost as certain as though they already had roots.

One very successful experiment with out-door cuttings of the grape was performed by allowing the cane to remain on the mother vines until the buds had started a growth of one-half inch or more, and the leaves had begun to unfold, every eye was separated, the old wood placed entirely below the soil, the new growth just appearing above the ground, shaded carefully, with a result of full eighty per cent. of vine.

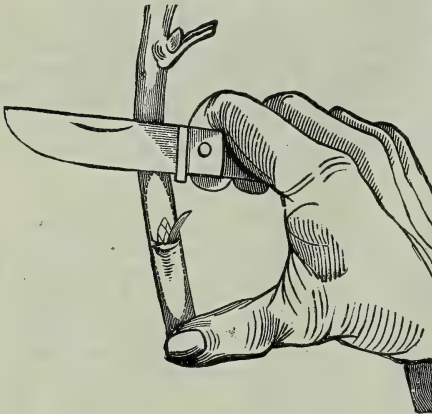
In the usual manner of preparing cuttings greater success follows when the cuttings are taken off immediately on the fall of the leaf before freezing, when they



Planting Root Graft; pressing dirt against it with dibble.

should immediately be packed away in moss or soil until time for planting in spring.

Grape cuttings from out-door planting may be made with single eyes, but all the advantages of a two-bud cutting may be retained by simply cutting across the node with a sharp knife, or with shears, commencing the cut opposite and one-eighth of an inch or more below the bud and finishing one-eighth of an inch or more above.



Cutting a Bud

## The Art of Budding.

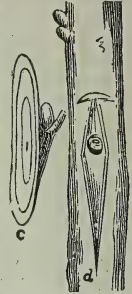
The object of budding is to rapidly multiply with the least possible consumption of coins and time. Every leaf bud may make

a tree. A slow growing or stunted stock cannot be budded at all with success, therefore the best possible culture should be given. All trimming of the stock should be deferred until the day of budding, as every leaf taken from a plant or tree lessens the growth. Many labor under the delusion that by removing the shoots from the trunks of their young orchard trees while in leaf they are hastening their growth. Bands for budding are secured by removing the bark of basswood in June or July and soaking it in water until the inner bark peels off in thin ribbons.

Budding; transverse cut and slit and bud ready for insertion.

After the blight usually attacks it soon after, stopping all growth, rendering budding impossible. The pear, we bud the plum, then

the cherry, following with the apple, and closing with the peach from the 10th to the last of September. Though much depends upon the season, I have found that early budding generally succeeds the best, but more attention is required to prevent the cutting of the rapidly expanding stock by the band that holds the bud. While a certain maturity of bud is desirable, immaturity is seldom the cause of failure. Apple buds must be set before they have become very prominent, or the season will be passed, inserting bud C where a bud has been cut out of the stock. I have budded the peach successfully when the buds set the stock.



could scarcely be discovered with the naked eye. Pear buds are the only ones I recall as having fully matured before setting. If the season is favored with frequent rains and the stocks are pushing ahead rapidly, budding may be deferred with less danger than if the season is dry and the sap moving slowly. A good budder selects his buds with great care, using none that are feeble or on soft, spongy wood, and no blossom buds. While the tying of the buds is easily learned by a bright boy, it must be thoroughly done or the buds will dry out and fail.

The illustrations tell how to bud better than words. The leaves are first removed,

leaving a short stub only for a handle. The bud is removed, with an inch in length of bark and a little wood directly under the bud. This wood used to be peeled away, but now it is left attached to the bud with better success. An opening is made in the stock, the bud is inserted from the top (by some from the bottom) and gently pressed into place by the part of the leaf stem remaining. There is seldom any failure in budding when done by experienced hands, but with the novice failure is not infrequent from the following possible defects: 1. The cross cut in the bark may not have been sufficiently wide to prevent breaking when opened; or too much effort may have been made to raise the bark with

Bud: Bud inserted and tied.

The illustrations tell how to bud better than words. The leaves are first removed, leaving a short stub only for a handle. The bud is removed, with an inch in length of bark and a little wood directly under the bud. This wood used to be peeled away, but now it is left attached to the bud with better success. An opening is made in the stock, the bud is inserted from the top (by some from the bottom) and gently pressed into place by the part of the leaf stem remaining. There is seldom any failure in budding when done by experienced hands, but with the novice failure is not infrequent from the following possible defects: 1. The cross cut in the bark may not have been sufficiently wide to prevent breaking when opened; or too much effort may have been made to raise the bark with



## HOW TO GRAFT.

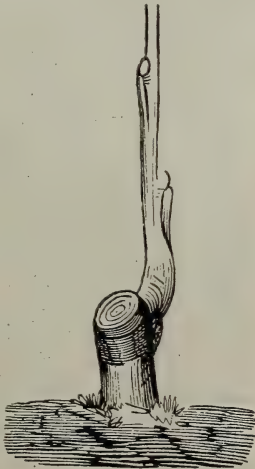
blade or handle, thus causing roughness—the knife-handle should never be used in this manner. The upper corners of the bark of the stock should be raised with one steady pressure of the knife-blade, and the bud then made to force its own way home, where it will fit perfectly, and no exposure of the parts to drying influences occur. The novice often fails to push the bud successfully to its place by the frail stem. The pressure should be toward the stock and downward. In obstinate cases we press down by inserting the knife-point crosswise just below the bud. 2. In taking out the wood attached to the bud the vital parts are liable to be injured. 3. The bud may have been inserted when quite immature, or the shield may have been cut too short—it should measure at least an inch in length. 4. If the bark clings to the stock all efforts to bud will prove futile; but this seldom occurs in the proper season under good cultivation. 5. The tying of the bud may have been loosely or otherwise imperfectly done, or the bands left on too long, causing the bud to be seriously cut by the expanding stock. The bands should in most cases be removed



Tying bud growth to stump of old stock.



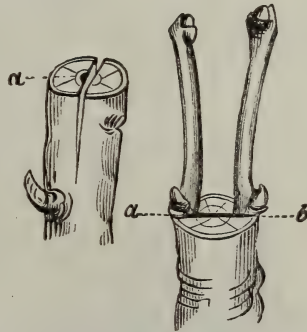
Ring budding. after fifteen days. 6. The soil should be cultivated at once after budding. I have known men to spend a day budding 500 trees, yet over 4,000 peaches have been budded in one day by an expert. I never heard of 4,000 plums or pears being worked in one day. I would prefer to have 500 well done than to have 4,000 worked poorly. Formerly apples were mostly root grafted, but nursery-men are getting more in the habit of budding them. Some of the buds inserted fail to grow. These are rebudded the next season, with the exception of the peach. Peaches that fail are grubbed out without apology. Cherries often get too large by the second year, but apples and pears might be rebudded the



First season's growth from bud

third year if necessary, but such large stocks produce crooks where the buds push out. It is more difficult to succeed in budding the plum than most other fruit trees. Experienced nurserymen buy the strongest stocks designed for budding, and would take no poor ones as a gift. They plant in rich soil and crowd them with high culture. Buds succeed in such stocks where they would fail in poor stocks, or these not so well cared for.

### How to Graft.



Cleft Graftings. Stocks cut and split, and Scions inserted.

Scions for grafting are usually cut late in the fall and stored in moist sand in the cellar, but hardy varieties may be cut at any time before the leaves begin to grow. Grafting out doors begins in the spring with the first warm days, and continues until the leaves are expanded in May. The scions being kept dormant the best time is when the leaves on the stock are just pushing out. But with the plum and cherry grafting should be done very early. The peach is seldom grafted. With large trees a branch is sawed off, the stock split, a wedge inserted to hold it open while a scion is placed at each side as shown in the cut *a b*, taking pains to make a close fit where the bark should meet. The cleft and wound should then be covered with grafting wax to keep out the air, made of equal parts of resin, bees-wax and tallow, melted together.



Whip Grafting.

WHIP GRAFTING and saddle grafting are methods of splicing the scion to the stock, offering a larger surface of contact, and being best suited to small stocks and indoor work. Apple root grafts are usually whip grafted,

# HOW TO PLANT AND GROW APPLES

Plant apple trees in October and November if your soil is ready. If the soil is not ready in the fall plant in April or May. Apples succeed best on uplands in preference to lowlands. Soil that has been occupied the previous year by corn, potatoes, or some other hoed crop is in good condition for planting apple trees or other fruits. If the soil is in sod ground, it is best to plow it in July, August or September and allow the sod to decay. Land so plowed will be in fine condition for planting the succeeding spring. Trees do not usually succeed so well when planted on freshly plowed sod land. Prepare the soil by plowing at least 7 inches deep, making the soil fine with harrow, cultivator and roller the same as for planting corn or potatoes. When the field is plowed and thoroughly fitted and the soil made fine, mark off the rows two rods apart each way; this is usually done by staking the field, but it can be done by drawing a line where row is to be planted. Or better yet, mark off the field with a corn marker the same as though you were about to plant corn, marking the rows both ways; then set stakes in one of the corn marker rows, selecting those rows which are about two rods apart each way. Then if you will run the plow through the rows thus marked, and run the plow crosswise of the rows about two rods apart, the cross points of these furrows would indicate where each tree should be planted no matter how large the field may be, and the trees will then line up from every point of view. Thus plowing a furrow both ways across the field will save considerable work in excavating for each tree, in addition to marking the exact spot where each tree should be located. Then place fifty or one hundred trees in a light spring-wagon, wet the roots of the trees and cover them with wet straw or a thick wet blanket, and drive along the row taking out one tree at a time as needed for planting; the hole dug for the tree should be 2 feet wide and 7 to 8 inches deep, aiming to be deep enough to plant the tree at about the same depth as it originally stood in the nursery, the roots to be covered with 6 to 8 inches of good loose, pulverized soil. After filling in a few inches of soil tread down the earth firmly over the roots, then throw in more soil and tread this down. It is important that the earth should be made firm over the roots of all transplanted trees, but the last few shovels of soil may be left loose as a mulch. I do not usually stake trees newly planted, unless they are in a very windy location. When the orchard is planted potatoes may be planted. In fact, potatoes are about the best crop to plant in a young orchard, if any crop is planted. The field will be already marked for planting, and the rows will be located so that the trees and potatoes

can be cultivated without interfering with either.

The soil about newly planted trees should be kept cultivated and hoed especially for the first year. Remember that loose soil about the newly planted trees acts as a mulch and keeps the soil moist and in a better condition than if a pail of water were poured about the roots each day. Never grow in a young orchard crops of oats, wheat or other grain, as these crops take up the moisture and rob the trees. Do not fail at planting, or immediately after planting, to thin out the branches leaving only three branches, and cut back each one of these three branches leaving them only one foot long. Each year after planting go through the orchard and give it a little pruning, removing superfluous shoots. It is much better than to neglect pruning for several years and then cut away many or large branches.

The apple is one of the most valuable fruits known. It is in great demand, and the demand is increasing constantly, notwithstanding the fact that numerous orchards are planted each year. Fortunes can be made by planting apple orchards, if the trees are well cared for. Watch the trees and if you find them infested with insects, spray immediately. We will send you a spray calendar telling how and when to spray on application. We keep constantly on hand the various kinds of spray pumps, also spray mixtures and all kinds of devices, packages, etc., desired by orchardists and fruit-growers. When the orchard comes into bearing it should be sprayed at least twice every season with Bordeaux mixture and Paris green to protect the fruit from the codling moth. You can grow plenty of apples without this spraying, but many of the apples will be wormy if the trees are not sprayed. The first spraying should be given immediately after the blossoms fade. The next spraying should be a few weeks later. Bees are helpful to fruit growers, therefore we advise you to keep a few swarms of bees.

There are thousands of varieties of apples. You should have varieties that ripen continuously from the earliest to the latest; but you should not attempt to have very many varieties for a profitable commercial orchard. Select those varieties which have done the best in your locality. If you need advice as to what varieties to plant write me, and I will advise you without charge. Order trees for planting several weeks or months before you want them, since it will take some time to get the trees dug, packed and delivered. I have a catalogue describing numerous varieties and giving prices on trees which I will be pleased to send free to any one who applies for it. The instructions given here for planting an apple orchard will apply to most orchards of other fruits.





### How to Plant and Grow Pears.

Plant pear trees in October and November, or in April or May. Cut back each branch to one foot in length at planting. Tread in the soil firmly over the roots.

There are two kinds of pear trees; First, the standard pear trees or those grafted or budded upon pear roots, which make large trees growing very tall, and enduring for more than a life time. Second, there are the dwarf pear trees which are smaller trees and lower headed, which are budded on quince roots. Dwarf pears bear fruit at an earlier age than standard pear trees, and are desirable for a garden, but are often planted in large orchards. Dwarf pear trees need more cultivation than standard pear trees, and should be headed back more severely each year. Dwarf pear trees should not be allowed to grow higher than 8 to 10 feet, the lower they are kept, by being cut back each year, the better. If they are allowed to grow very tall the wind is apt to lean them over or possibly break some of them off. For the garden I advise planting what I call a dwarf pear hedge through the center of the garden. This row will not interfere with the plowing or cultivating of the garden and will occupy scarcely any room, and will produce an abundance of fine fruit at trifling cost. I would plant the dwarf pear trees in this garden row 4 feet apart. I would plant different kinds of varieties from the earliest to the latest; for the earliest, the Wilder pear, then Bartlett and Seckel which ripen next, then the Flemish, Lawrence, Anjou, or Winter Nellis which ripens still later and endures into the winter. It is not necessary to buy large pear trees for this row through the garden. Small size trees will do equally as well and bear as soon. Where pear trees are not to be carefully cultivated, and where they are to be planted in the sod, I would advise planting standard pears which are better calculated to care for themselves. All fruit trees bear larger and finer fruit when cultivated than they do when standing in grass. If you are compelled to plant pear trees in sod ground, keep the surface of the soil over the roots mulched with a few inches of straw manure. Each season's growth of standard pear trees should be cut back at least one-half the length of each shoot. In this way you keep the tree in good shape and keep it from growing high.

High growing fruit trees of any kind are not desirable for the reason that it is more difficult to spray them and pick the fruit. Thus I recommend buying low headed fruit trees of all kinds whether it is pear, apple, plum or peach.

The Bartlett pear is one of the best market varieties. It is a large pear ripening in late summer or early fall. The Anjou is a superior late fall variety which can be kept into winter with careful treatment. Kieffer is a strong growing pear, the most productive of all pears, excellent for canning, and succeeds everywhere. Flemish Beauty is considered the hardest pear.

Pears are a delicious and tempting fruit possessing great beauty. I know of no greater ornament to a garden than a pear tree in blossom or laden with beautiful specimens of fruit. Do not wait for pears to become soft before picking them. Early ripening pears particularly should be picked while they are quite firm, as soon as they attain full size and color, and the seeds have become black. Ripen them in dark drawers. If you cover a layer of fruit with a woolen cloth they will color most beautifully.



### How to Plant and Grow the Cherry.

Large trees of cherry must not be pruned much. They will not stand pruning like the apple or pear. At planting cut back the branches to one foot in length. Plant in October and November, or in April and May.

I well remember the cherry trees that grew in my father's garden when I was a child, living upon the old homestead farm twelve miles out of Rochester, N. Y. Children are fond of cherries. Thus in the early spring I watched them when in blossom with anticipation of the feasts which were to come in the way of fresh picked cherries dropping into my mouth, as well as in the delicious cherry pies which my mother used to make, and the cans of preserved cherries which were so greatly relished during the winter months. These old time cherries were the red variety, some times called the sour or pie cherry. The white, yellow and black cherries were not so well known in those early days. These red cherries, of the Early Richmond or Montmorency type, were large and juicy, the trees were very productive, and the fruit remained upon the trees for nearly a month, getting better and better

as the days went by. I have never begrudged the few cherries which the birds came to eat, leaving their nests and retreats in the wood lands for these tempting repasts. At the present day I welcome the birds in my cherry trees knowing that the birds do me far more good in destroying insects than the value of the few cherries which they consume.

What more beautiful sight is there than a cherry tree laden with its beautifully tinted globes of fruit? There is no tree better calculated for the home grounds and garden, or the borders of the lawn than the cherry tree. Unlike many other fruit trees the cherry will bear beautiful fruit in large quantities when grown in grass or sod without cultivating, but the first few years after the tree is planted it should be kept cultivated or lightly mulched over the surface of the ground with strawy manure. Plant the cherry tree in friable soil, sandy soil preferred. It will not succeed so well in stiff clay. In planting the trees dig a hole 7 to 8 inches deep and cover the roots with 6 or 7 inches of soil, packing the soil firmly over the roots, following the instructions given for planting the apple, in preceding pages. Thin out the branches at planting, leaving not more than four branches, cutting back all branches leaving only 1 foot in length to each branch. The cherry is a profitable market fruit. The red or sour cherry is mostly in demand for canning, for pies and sauces, while the white or black cherries such as Napoleon or Black Tartarian are most desired for eating out of hand. Of late cherry orchards have proved very profitable where sufficient help can be secured to gather the crop. No garden or home ground is complete without cherry trees. Train the head of the cherry tree low so that the fruit may be more easily gathered. I have not found it necessary to spray the cherry trees.



#### How to Plant and Grow Plums and Prunes.

Plant in October or November, or in April and May for most localities. Cut back the branches one-half at planting. Do not prune much in later years.

Plums and prunes belong to the same family, one differing from the other mainly in shape and in the quantity of sugar which

they contain. Prunes are elongated and contain so much sugar that they can be evaporated, producing the dried prunes of commerce. Since plums and prunes are so similar I will speak of all as being plums. Plums are perhaps the most productive of all fruit trees, tending to overbear. I often see plum trees so loaded down with fruit as to break the branches. I have seen such continuous ropes of plums upon the trees as to cause them to crowd together so closely as to induce rotting in certain kinds. When the trees are thus heavily laden it is wise to remove at least one-half of the fruit at the earliest period possible. Years ago the curculio was greatly feared by plum growers, but of late years many consider the curculio a friend since it thins out the fruit, preventing the trees from overbearing. Plums bear at an early age, and the fruit is greatly desired by the housewife for preserving, canning, for eating out of hand and for other purposes.

Of late years a new family of plums have been introduced into this country, known as the Japan plums, which have proved of great value. The Japan plum looks more like a peach tree than ordinary plum trees. The Japan plum tree bears fruit at an early age, is remarkably beautiful in color and the trees are remarkably productive. Our friends and patrons everywhere have been delighted with the Japan plum, the leading varieties of which are Burbank, Abundance, Climax, Red June, etc. The older and better known varieties of plums are the Lombard, Bradshaw, York State Prune, German Prune, Damson and others. The plum tree is nearly as hardy as the apple, though not quite so hardy. Japan plums are about as hardy as the European varieties. Every family should have a dozen plum trees growing in the garden. I have a plum tree growing near by kitchen door which has delighted every member of the family and our guests and neighbors for many years. The fruit begins to ripen August 1st and continues to ripen for six weeks or longer, furnishing a continuous feast of most delicious fruit similar to the apricot, tender flesh, greenish yellow in color, with a bright red cheek. Such a plum tree as this in your garden should be valued at \$100, but can be purchased for 20 or 25 cents. For instructions about planting the plum and for fitting the ground, see instructions for planting the apple on previous pages.

#### GREEN'S POULTRY DEPARTMENT

Cockerels, Pullets, and Eggs for Hatching for Sale

Why not have birds on your place from Chas. A. Green's home? We offer for sale four breeds, as follows: White Plymouth Rocks, Barred Plymouth Rocks, Single Comb Brown Leghorns, and White Wyandottes.



## How to Plant and Grow Currants and Gooseberries.

The planting and growing of currants and gooseberries being almost identical, I will speak of them both as though I were speaking of the currant alone. What is good treatment for the currant is good for the gooseberry. The gooseberry more than other fruits should be planted in October and November if possible, if not possible to plant them in the fall, they can be planted in April and May. Nothing is easier to plant or succeed with than the currant and gooseberry if they are planted early. But they throw out leaves early in the spring, thus if planted late in the spring they do not succeed so easily. There is great difference in the vigor and growth of different varieties. Red Cross currant is a vigorous grower and requires plenty of room. Plants can be set not less than three feet apart in the row. The rows should be six feet apart; as with the planting of all kinds of fruits the soil should be carefully prepared and made fine before planting currants and gooseberries; remember that coarse lumpy ground cannot nourish the roots of any plant nor keep them from dying out and perishing. This is the principal reason why it is easier to transplant on sandy soil than on clayey soil. Cut back each plant one-half its length at planting. In future years thin out the branches somewhat, removing a few of the old branches each year, but the currant and gooseberry will bear abundantly without any trimming. There is no fruit more highly prized by the housewife than the currant, the red currant especially being desired for jelly, sauces and pies, and to mix with red raspberries for various purposes. Green currants and gooseberries make excellent pies when pie material is scarce.

The currant worm should not deter anyone from planting since it can easily be destroyed by sifting powdered hellebore over the foliage when wet with dew, being careful not to breathe any of the dust of this poison, or by spraying the bushes with a solution of Paris green; a large spoonful of Paris green to a quart pail of water.

### How to Plant and Grow Blackberries.

Blackberry plants can be set in October and November or if not ready then they can be planted in April and May. The black raspberry plant resembles a small tree, but the cane or stalk is cut back when dug, to about 1 foot high. Blackberry plants should be set out much as you would set out a small tree, digging a hole in finely pulverized soil six inches deep, and packing the earth firmly over the roots continually as the hole is filled, leaving the soil loose over the surface. Do not be surprised if the plant does not begin to grow immediately after being set out. You must have patience with all kinds of plants and trees and not expect them to start leaf growth soon after plant-

ing. Sometimes growth does not begin on the blackberry, raspberry plant, grape vine or rose bush for nearly a month after planting, and yet if the ground is kept well cultivated shoots will probably spring up from the roots and make vigorous and productive growth, which will delight and refresh you for many years. Give the blackberry plants plenty of room. In field culture the roots should not be nearer together than 7 feet; in the garden one row of blackberries planted 12 to 20 feet from any other row of fruit plants or trees would give delightful results, and be worth \$25.00 a year to any home. There is no pie so dear to my heart as the blackberry pie, and there is no fruit pleases my palate better than black raspberries with cream and sugar. Blackberry jam is unexcelled. Blackberries are a healthful fruit. Blackberry cordial is recommended by the doctor. While the blackberry succeeds best on sandy or loose friable soil it can be grown successfully on almost any soil which has borne good crops of wheat or corn. When once planted the blackberry bush will continue to bear fruit for almost a life time if properly cared for. The ground should be kept well cultivated, or if not cultivated should be mulched with strawy litter, leaves, barnyard manure, or anything of that kind.

Be careful how you cut back the tops of bearing canes of the blackberry in the spring or summer. The Eldorado is a marvelous blackberry at Green's fruit farm, but if the bearing canes are cut back, most of the fruit blossoms will thus be removed, and the crop will be small, since it bears its fruit largely from the ends of the branches. The best time to cut back the canes of the blackberry is in July, when the new growth can be nipped back by simply cutting out an inch or two of the top of each cane, but the blackberry will not bear cutting back so freely as the raspberry. The blackberry under proper culture is a marvelously productive berry, which is in great demand, and can be grown with great profit. Snyder is considered the most hardy variety. Minnewaska and Eldorado are favorites at Green's fruit farm.

### How to Plant and Grow Raspberries.

Plants of the red raspberry have strong roots and canes and are more like a tree than plants of the black cap raspberry. Most people have no trouble in planting the red raspberry, which though much smaller than a tree, is planted in the same manner, but care must be taken not to set the plants too deep, yet deep enough. The roots should be not deeper than four to five inches, that is just low enough not to be disturbed by the cultivator. The best time to plant red raspberries is in October and November, but they can be planted in April and May. Set the plants in rows 6 to 7 feet apart, the plants to be

three feet apart in the rows; mark the ground so that you can cultivate it both ways, the same as you would corn. Red raspberries reproduce themselves by suckers, therefore as the branches become older these suckers if not cut off will so completely fill the ground with a thick mat of plants as to produce very small and inferior berries. But if the suckers are treated as weeds for the first year or two and are cut off the moment they appear, and the ground cultivated well both ways, the red raspberries will continue to bear for many years.

The black cap raspberry is entirely different from the red raspberry, and requires different culture. There is no danger of the blackcap raspberry crowding itself by a multiplication of plants, since it is propagated from the top end of its canes, which are buried in the ground in July and August. If not buried in the ground by a careful man it will not take root and will not propagate itself. The blackcap raspberry requires more room and is more wide spreading in its growth than the red raspberry, therefore the rows should be farther apart. It is easy to have plenty of red and black raspberries. All you have to do is to plant a row through your garden each plant being two feet apart; plant half to red and half to black raspberries, or devote one row to red and one row to black, and you will have an abundant supply. Black raspberries can be planted in October and November, but I would prefer to plant in April or May. Those who plant raspberries by the acre have made them a very profitable crop.

#### How to Plant and Grow Strawberries.

While April and May are the best months in which to plant the strawberry, and this is the season when most strawberry growers do their planting, the strawberry may be planted in August and September if potted plants are purchased, but these are somewhat expensive for the average planter. Do not expect that any nursery can sell you strawberry plants at ordinary prices during the summer or early fall, for there are no young plants fully developed at that time except potted plants. Straw-

berry plants are easily set out if you know how to do the work, but if you have no experience you are liable to fail. Make the ground for the strawberry bed as fine as possible and mark it off into rows 3½ feet apart. Place a quart of water in a wooden pail and in this pail place 100 strawberry plants or more, but **do not** wet the leaves, wet the roots only. Do not allow the roots to be exposed to the sun and wind for a moment, for they are easily destroyed. If the roots are very long I cut them back fully one-half at planting. When you set the plant in the soil your intent should be to get the lower ends of the roots straight up and down, but be careful that the crown of the plant is not covered by planting too deeply, and yet see that each plant is set deep enough so that the roots are all covered and a portion of the lower part of the crown.

The strawberry plant is usually set too deep or not deep enough, either of which is fatal. After planting go over the beds, treading the soil firmly about each plant, then drawing a little loose soil about each plant with a hoe, and keep the ground well cultivated and hoed thereafter. The matted row is the best method of growing strawberries providing you do not allow too many runners to take root, thus matting the ground so thickly that the largest berries and greatest quantity cannot be secured. The ideal strawberry row is that in which the plants are about 4 inches apart and the matted row, so called, about a foot wide.

The strawberry is C. A. Green's favorite berry. It was the strawberry upon which he placed his dependence for ready cash when he was getting a start on the fruit farm, after severe financial reverses in the city, at a time when he needed money more than at any other time of his life. The strawberry is the poor man's berry. He who has but a small village lot can make more money by growing strawberries there for sale than by devoting the land to any other purpose. He who has several acres on a farm cannot do better than to plant strawberries to supply his immediate neighbors or villages 10 to 15 miles away, also the farmers.

#### Number of Trees on an Acre

30 feet apart each way.....	50	10 feet apart each way.....	425
25 " " ".....	70	8 " " ".....	680
20 " " ".....	110	6 " " ".....	1210
18 " " ".....	135	5 " " ".....	1745
15 " " ".....	205	4 " " ".....	2725
12 " " ".....	300	3 " " ".....	4840

#### Distances Between Trees and Plants when Planting

Standard apple trees, 30 to 40 feet apart each way.  
 Pear and cherry trees, 20 feet apart each way.  
 Cherries will do well planted 18 feet apart each way.  
 Plums, peaches and apricots, 16 feet apart each way.  
 Quinces, 10 to 12 feet apart each way.  
 Currants, gooseberries, raspberries, 3 to 4 feet apart; blackberries, 6 to 8 feet apart; grapes, 8 to 10 feet apart.

**GREEN'S NURSERY CO., Rochester, N. Y.**



# AMERICAN POULTRY KEEPING.

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## Importance of the Poultry Industry.

By Charles A. Green.

The reader will be surprised to learn that the value of eggs, dressed fowls and live poultry in the United States amounts to \$290,000,000, a larger sum than that of any other one product of our country. For instance, the wheat crop of the United States is valued at \$237,000,000 and the value of the milch cows and their product is \$263,000,000 and these being two of the largest items of production in this country next to poultry.

You will be surprised at these figures for the reason that poultry is seemingly insignificant. The hen is a modest fowl of small size as, compared with swine, horses or cows, but you must not forget that she accomplishes important work.

One reason why the value of the poultry interest is so large is that it is a universal interest. Almost everybody keeps hens as well as other fowls. Here is a subject, therefore, of interest to everybody.

The subject of poultry is gaining in interest every year, and has been gaining for many years past. Eggs as an item of food are but just becoming appreciated. Not only are eggs enticing as an item of diet, but they contain nearly all the elements required in building up and replenishing the body of man. People will buy them freely no matter how high the price.

I can never forget my experience as an egg gatherer on the old farm where I was born. The barns were built upon high walls, therefore the bays were deep and wide. Sometimes the lower portion of the barn was floored over in order to make a grainery. There were no poultry houses, poultry running wild over the broad building, roosting and laying eggs wherever it was most convenient; therefore, to be a good egg-hunter was quite an accomplishment. Hens not only made their nests in fence corners, under brushes, briars and weeds, but they also resorted to the dark recesses under the floors of the barn where

no person but a small boy could force an entrance, crawling upon his stomach. Many times have I found overflowing nests of eggs in these dark retreats, and sometimes have been surprised by the presence of skunks there, also looking for eggs. Over and in the mows of hay and grain were also favorite resorts for hens' nests. I remember carrying to the house as many as a peck and sometimes a half bushel of eggs gathered from these barns and surrounding nooks.

In those days we heard nothing about breeds of fowls. A hen was simply a hen, and nothing more, and yet these hens were prolific layers. When my father went to the city, he carried large boxes of eggs packed in oats. I do not doubt that he sold them at much lower prices than we sell them for to-day. Then there were no poultry journals, so far as I can remember, and there was little said in the agricultural papers about poultry. When cold weather came the fowls simply retreated to the warmer recesses of the barns. The production of eggs during the winter seasons were not equal to that of the present time. I remember how the stillness and quiet of the old farm was enlivened by the joyous cackle of the hens.

### INCUBATORS AND BROODERS

were not known when I was a boy. If any one in those days had broached such a subject as the artificial incubation of eggs and brooding of chickens he would have been dragged to the lunatic asylum without a moment's delay. These modern inventions have been slowly accepted by the public. The early incubators were imperfect, and knowledge of manipulating them was still more inadequate. Many people purchased, experimented with them, and finally stored them in some out of the way place where they were never again molested or made use of. One could often purchase for five dollars an incubator which might have cost fifty dollars. But inventive genius has at last succeeded in constructing a machine

## IMPORTANCE OF THE POULTRY INDUSTRY.

which will hatch eggs successfully, and brooders which will, with proper skill and experience in managing, brood the chickens with success. At the present day nearly all successful poultrymen use incubators and brooders. The failure with brooders in many instances arises from numerous visitors, strange people, who have a curiosity to see a brooder, and whose visits disturb the young chickens. The chickens soon become accustomed to the owner and are not disturbed by his visits, but new comers startle them and cause them to tumble over each other in their haste to get away from the intruders. Perhaps Pekin ducks are the most timid and sensitive of all fowls, the most easily frightened or injured by this cause.

### CITY POULTRY KEEPERS.

There are many fanciers of poultry who live in cities and who cannot resist the temptation of producing their own eggs and dressed fowls. These good people seem to get much satisfaction out of poultry-keeping; indeed, far more satisfaction than do their neighbors. Poultry in cities seem to stray even farther away from home than they do in the country, and their daily visits to neighbors' houses and gardens are not usually welcome. I have a neighbor who keeps only one fowl, and that a big rooster. This rooster has for a long time made a practice of coming over my fence and engaging in a desperate fight with my rooster daily. Most people would have killed the neighbor's rooster and sent it over to him for dinner. After two years of patience and warfare I finally put the neighbor's rooster under cover, where I fed and watered him for several weeks. Finally the neighbor learned where he was, came over to my place and abused me roundly, carrying his rooster home under his arm. The next morning this rooster was back again on my place fighting with my rooster as usual, and has continued his sociable visits up to the present time. I have another neighbor a hundred rods away whose fowls come over to my place every morning and remain there until night, when they march home with full stomachs and entire satisfaction with the privileges furnished by my broad acres. In the opposite direction I have two neighbors who keep large numbers of fowls. Every morning

they start off on a voyage of discovery over my place. Of course I have to keep my own hens confined nearly all the time. I have a vegetable garden, also beds of strawberries, raspberries, grapes and other fruits, which fowls are extremely fond of. I enjoy having good neighbors and I am very slow to do anything to get the ill will of a neighbor, but what shall I do with my neighbor's fowls?

### A LITTLE PERSONAL EXPERIENCE

All animals need fresh air and exercise. Criminals in prison without labor soon degenerate and perish. Wild animals confined in cages of menageries are short-lived. No one can expect to have fine poultry and get good results in flesh or eggs if he keeps his poultry confined, no matter how palatial may be the prison. My practice has been, where I cannot permit the fowls to be out of doors all the day, to give them their freedom after three or four o'clock. If I let them out in the morning they will lay eggs in the hedge rows and fence corners where I cannot find them, and also may stray away and get into mischief. During the winter it is as necessary to give the fowls exercise as it is for criminals in our prisons to have exercise. To this end we strew chaff, or other similar material, over the feed space, compelling the fowls to scratch therein for the grain which they consume.

The difficulty with most people in not having eggs in winter is owing to the lack of protection from cold. Poultry houses in which water freezes hard are not suitable for securing eggs in winter. I not only cover the inside of my poultry house carefully with building paper of the best grade, but over this I place studding, and to this lath and plaster. The outside of the poultry house being of matched boards gives me a warm poultry house that keeps out frost.

Sunshine is necessary to the health of all animals. Poultry cannot be healthy unless sunshine is admitted freely to their quarters. To this end I have windows facing the south, which admit freely rays of sunshine. On the south side I also have a moderate sized yard, fenced in with wire where the hens can get a limited amount of exercise and fresh air during the warm days. Keep the poultry house clean and free from lice.



# HINTS ABOUT POULTRY.

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## Poultry on the Farm.

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Fanny Field writes: I don't suppose half, no, not even one-fourth of all the farmers in the country who keep poultry know for sure whether they are keeping it at a profit or not. A good many will say: "It don't pay to keep hens; they cost more than they come to, and I wouldn't have one on the farm if it were not for having eggs and chickens to eat." But still they don't know whether their poultry pays or not, for they never kept any account of either eggs and chickens used or sold, or of the food consumed by the fowls. Others will say, "Oh, yes, our poultry pays;" but ask them how much profit per head they made from their fowls last year, or any other year, and they "don't know; never kept any account." But whether farmers keep an account or not, whether they know it or not, poultry on the farm pays. I firmly believe that the commonest flesh of common fowls, even those that have to shift for themselves most of the time, at the very least pay their way. Take the same flock, and give them the care, food and shelter that all farm poultry should have and may have, they will pay the owner a big profit on the investment.

## The Requisites of Successful Poultry Keeping.

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Fowls will pay well on the farm if you will care for them, and give them the little attention which they require. In the first place you need a person to care for them, one who does not want to see dumb animals suffer, and who is willing to be tied down a little, for the fowls need to be fed regularly. Select some member of the family who is in sympathy with the poultry, and who will take pride in seeing them thrive under his care.

Have a building separate from the regular farm buildings, placed in a sheltered, sunny spot, well drained, in a corner of the orchard if not too far from the house. This may vary according to the number of fowls to be accommodated and the space or funds available, but no matter how you build, you must keep certain things in view from the beginning. You want warmth, dryness, ample space and simplicity of inside arrangements that they may be easily cleaned and kept free from lice.

Hens will lay more eggs if divided into pens of not more than 10 or 12 and in building would make the house 16 feet by 12 feet for each 12 hens to be housed; this allows for a 4 foot alley on the north side. I have found that in the long run a house made with a good solid balloon frame with matched or novelty siding on the outside, with tarred paper between the boards and studs and on the inside another thickness of tarred paper, covered with matched ceiling, is best. For the roof I use what is known as clear butt shingle, and for the inside partitions, planed hemlock boards for the first 3 feet from the floor and 2-inch mesh wire netting from that up to the roof. In the south side put a 12-light window for each 8 feet; many people make a great mistake by putting too much glass in their poultry houses, forgetting that it is as good a conductor of cold as of heat. Make the posts 6 feet high so there will be no bumping of the heads in passing about inside. I would make the nests and roosts movable, so that in cleaning they can be taken outside of the house if wished.—Farm and Home.

## Feeds and Feeding.

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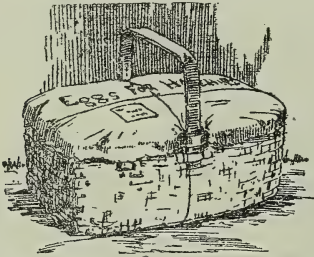
- Grit must be sharp.
- Feed before you water.
- Do not feed grass for grit.
- Feed a mash the year round.
- Good food is positive economy.
- Clean out the feed troughs daily.
- Oyster shells are too soft for grit.
- Never throw soft feed on the ground.
- Round pebbles will not answer for grit.
- In feeding grain in the runs broadcast it.
- Do not feed corn during the hot weather.
- Millet seed is a great egg-dropping grain.
- Always feed the mash crumbly, not sloppy.
- The noon meal is not necessary during the summer.
- Do not allow the mash to sour in the troughs.
- Beans are excellent food, being highly nitrogenous.
- A quart of feed for twelve hens is a good measure.
- Milk can be fed in any form—sweet, sour or buttermilk.
- Buckwheat is an egg-producing food, but a steady diet of it is apt to be over-fattening.—A Few Hens.

## Essential Conditions for Egg Production.

A warm house and a variety of food are necessary, but these will not bring eggs unless the hens are healthy and are kept busy scratching, as they must do to obtain worms and insects in the summer. In the morning I give them a warm mash of bran, middlings, corn meal and sometimes a little ground bone. I want to feed them only just what they will eat up at once, then several times during the day throw a little small grain, wheat, oats or buckwheat for a variety, on the floor, and cover it several inches deep with a litter of leaves, chaff or other material. Cut bone and meat should be kept in boxes with slats over the top. Green bone from the butchers, cut with a bone cutter, is necessary to get the best results, as it takes the place of the worms and insects which the hens get in summer. Shells and grit must be provided and boxes of dry earth near a sunny window for a dust bath.—W. H. Jenkins, in *Home and Farm*.

## Eggs for Hatching.

The season will soon be at hand when the thoughts of chicken raisers turn to the subject of eggs for hatching. A great many persons besides those who may strictly be styled "fanciers" have occasion to ship eggs away for hatching purposes.



It may be to exchange one's own stock for the "fresh blood" of another; it may be as a gift to friends in other places, or it may be because eggs for hatching have been advertised in the farm papers. Whatever may be the condition, it is wise to understand just how best to pack eggs so that they will withstand the rough handling on the part of expressmen, and hatch well when they reach their destination.

Eggs are sent by express packed both in small boxes and in baskets. The former practice, I know by experience, is decidedly unfavorable to the eggs' future prospects as promoters of chicken culture. Expressmen will handle boxes more roughly than baskets. They feel instinctively that there is something breakable about a basket and in a basket. I have

tested this matter again and again, and have never been able to get as good hatches when eggs are shipped to me in boxes as when they came in baskets. Watch an express messenger as the car comes to a stop at the station. He will hand out the baskets, but will very likely toss the small boxes across the platform, to be caught by another—or dropped. So select good, strong, but cheap, baskets, and line them well with newspapers. Put into the bottom a couple of inches of chaff, or bran, or oat hulls. Then put in a layer of eggs, each one wrapped loosely in a small piece of newspaper, the latter being crumpled about the egg to make a cushion for it. Put each wrapped egg a little way from its neighbor, and from the side of the basket, and fill in between them and around them all with the chaff, bran or hulls, putting at least an inch over the top of them. Then lay on a newspaper and put in another layer of eggs, proceeding as before. A basket of ordinary depth will hardly hold more than two layers, packed as I have stated. Put a thick layer of the packing over the top, and cover all with newspaper, tucking it in well at the edges. Over this stretch a piece of white cotton cloth in the manner shown in the cut, and sew the edges to the basket splints, or around them. With a small brush paint "Eggs for Hatching" on top, and attach the card for the address.

Packed in this way, I have sent eggs more than a thousand miles by express, and had them hatch. Be sure that the eggs are fresh when packed, and that they were laid by hens in good, vigorous health, and not too fat. The eggs should also have been laid by hens that exercise vigorously, for such are much more likely to be fertile. The one who buys eggs for hatching, and pays express charges on them, has a right to demand that they be in the best possible shape when received—not simply whole, but able to hatch out vigorous chicks.—*Tribune*.

## Pickings From the Yards.

—When thinning out a flock of geese always sell the young ones; the old ones make the best breeders and bring a low price.

—Market all the old hens. You will save the cost of a winter's feed, besides allowing the remaining hens more room.

—If you have a surplus of pure bred cockerels, advertise them at once. You can afford to sell them cheaper now than you can in the spring.

—It has been estimated that if farmers could be induced to discard scrubs and use only pure breeds, the increase in value of poultry products would be fully 100 per cent.



# POULTRY DISEASES AND REMEDIES.

## Poultry Diseases and Remedies.

"Nearly all poultry diseases are caused by one or other of these four things: Cold, damp quarters, want of cleanliness or bad feeding—in other words, by neglect somewhere. It is far easier to prevent than to cure. The great obstacle to contend with when birds are ill is that since they are covered with feathers, there are few symptoms to observe, and as you cannot tell what is the matter with them, very often you are compelled to prescribe very much in the dark.

"In most of the fatal diseases there is a poisonous fungus growth in the blood. Fowls never perspire, by which means many evils might be thrown off, on the contrary, any evils that they have must be thrown off by respiration, and the result is that the great majority of poultry diseases are around in the head, throat and lungs, and therefore, it is in these parts that we must look for the symptoms of disease.

"Very often diseases are inherited; that is to say, the parent stock themselves were unhealthy and passed their diseases onto their progeny. If any one should be so unfortunate as to have a flock suffering from inherited disease, I would strongly advise the butcher's block, and the obtaining a new stock.

"To my mind, also, a certain class of inbreeding is also injurious—such as the mating of brother and sister.

"There are, however, many cases in which exposure or other active cause had occasioned in the most healthy birds an acute disease, presenting plainly marked symptoms, the treatment of which should be well and thoroughly well understood. Such cases are most amenable to judicious treatment, and fowls of great value may thus be saved, which without this knowledge, might otherwise be lost.

The best doctors are those who watch their patients while well and prevent sickness instead of waiting for symptoms and then trying to cure them. These find their best remedies in the regulation of the diet. It is, therefore, important to remember that fowls require good, wholesome food, clean water and plenty of fresh air.

Lack of proper ventilation is one of the commonest causes of disease. A great

number of breeders run away with the idea that suitable ventilation has been secured when a ventilator has been put in, with its bottom opening flush with the roof. This is a great mistake. It is the foul or cold air we must get out of our building without carrying off too much of the hot air, but when the ventilator comes only just through the roof the result is that we carry off the bulk of the warm or hot, which, during the winter months, it should be our aim to retain in the building. The foul air is always at the bottom of the building, where also the air is coldest. This foul air can best be carried off by extending the ventilators downwards to within eight or ten inches of the floor. This can be easily accomplished by making your air shaft of six-inch boards, and bringing it, as directed above, to within eight or ten inches of the floor. The result will be that you will have the coldest air, which is also the foulest, carried off, and that the warmer air will be retained.

For use in summer I have an opening cut in the ventilator shaft close to the ceiling, and when this is opened the warm air at the top of the building is carried away. The one ventilating shaft thus carries off the cold, foul air in winter and the overheated air at the top of the building in summer.

We should utilize as much of the warm air as possible in winter, but care must be taken to see that it does not become foul. The ventilator, carefully watched and regulated, will prevent this.

Cleanliness.—Next, it is of the utmost consequence that the premises are kept thoroughly clean, and that the houses disinfected at least once every two weeks with carbolic acid and water in the proportion of two tablespoonfuls of the acid to a gallon of water.

Distemper.—To this disease all chickens are subject, and it may be contracted at any time, but more especially in the fall of the year. It is easily cured.

Symptoms.—A listless, quiet disposition. During the first day there is a slight puff or fullness in the face. On the second day a white froth will be observed in the corner of the eye. There is also a decided loss of appetite.

Treatment.—Isolate the fowl affected and place it in warm, comfortable quar-

## POULTRY DISEASES AND REMEDIES.

ters. Bathe head and throat twice each day with a solution of vinegar and water in the proportion of one of vinegar to ten of water, and give a one grain quinine pill every morning until the patient is cured. It is well also to put a little iron into the drinking water. Four days of this treatment will usually effect a cure.

Roup.—This is the second stage of distemper, and unless the affected fowl is a very valuable one I would destroy that bird and give close attention to the rest of the flock. Thoroughly disinfect the poultry house and add iron to the drinking water. A little sulphur in the soft food would also result in good.

Symptoms.—Swelling of the head to such an extent that the eyes are often closed, and a discharge from the eyes and nose which is very offensive to the smell. These discharges result in a thickened pus.

Treatment.—Press the nostrils until they are free from matter. Bathe the head and throat with the solution of vinegar and water the same as for distemper. Give a teaspoonful of castor oil and a one-grain quinine pill night and morning. Birds affected should be isolated and kept warm and dry.

Chicken-pox.—Symptoms: An eruption on the comb, face and wattles; in color, yellowish white.

Treatment.—Isolate all affected birds and disinfect the poultry house. Remove the crown from each eruption. This will leave a bunch of tiny spiles or spikes, which will bleed profusely. Take a common caustic pencil and rub each scab. Next day apply a mixture of carbolic acid and vaseline. In about ten days all scabs will disappear. Give the fowl a one-grain quinine pill every day for four days. Feed soft food, into which put chopped onions. If the eyes are closed so that the fowl cannot eat, make small pellets of food, dip them into milk, and you will find no difficulty in slipping them down the fowl's throat. Chicken-pox is usually cured in about ten days if taken in time, but if neglected it will carry off the entire flock. It is a very contagious disease.

Canker.—This is a terrible disease and is usually caused by dirty houses and filthy quarters.

Symptoms.—Diarrhoea sets in and the throat becomes inflamed and hot. This is

followed by a white blotchy matter forming on the tongue and throat, often stopping up the gullet.

Treatment.—Isolate the fowls affected and disinfect the poultry house. Clear out the throats of the birds diseased, scraping off all the white, cheesy matter. This will often cause the throat to bleed. Then touch the arts with caustic. Give a teaspoonful of castor oil. The caustic should be applied every other day.

Sure Cure.—“Use a knife in the neighborhood of the throat, freely dividing the head from the body.” It is better to kill the afflicted individual and then look after the remainder of the flock.

Bumble-foot.—Symptoms: A swelling on the bottom of the foot, which extends to the uppermost side. It is usually caused by a fowl jumping off a high roost onto a hard floor.

Treatment.—Lance the swelling and squeeze out all the pus or matter. Then poultice with linseed meal, renewing the poultice every morning.

Diarrhoea.—This troublesome complaint is caused by any sudden change in the diet, change in the temperature, and hence is rather common. It is also caused by the lack of fresh water for the fowls to drink. Fresh water should be given in summer at least three times a day, and it should be protected from the sun. Diarrhoea is often caused by no water being provided, so that the fowls drink from the barn yard pond.

Symptoms.—The discharge represents oil and pepper mixed, with green or yellow streaks through it. The fowl shows great exhaustion, and moves about in a listless manner as if its muscles were gone.

Treatment.—Take equal weights of cayenne pepper, rhubarb and black antimony, mix thoroughly. Put a tablespoonful into a quart of shorts. Isolate fowls affected and feed them the shorts with this mixture twice a day. I have found this remedy to check the disease at once. Another excellent recipe is as follows: Sweet tincture of rhubarb, two ounces; paregoric, four ounces; bicarbonate of soda, one-half ounce; essence of peppermint, one drachm; water, two ounces. Dose. One tablespoonful in a quart of water. For young chicks an excellent cure is scalded milk. I have also found common starch excellent.—Thomas A. Duff's Essay, in the American Fancier.



# ALL ABOUT PLUMS AND PLUM CULTURE.

*How to Succeed with this Delicious Fruit, so  
Indispensable to the Housewife.*



Lombard Plum.

Edited and Published by

CHARLES A. GREEN,

ROCHESTER, N. Y.

## How to Grow Plums.

It is an attractive sight to see a plum orchard in full bearing. Plums are not difficult to cultivate, and they are among the hardest of our orchard fruits. Taking all into consideration, the best soil for plums is a loose, deep, gravelly loam, with an open sub-soil, such as is suited for apples or potatoes, although almost any soil may be used provided it is well drained.

The trees can be planted much closer together than apple or pear, and yet in field cultivation it is not best to crowd any kind of fruit trees; but in gardens plums will fruit well when planted ten or twelve feet apart. Plum trees bear at an early age. The yield of plums from an acre is surprising. Perhaps no fruit needs more frequent manuring than the plum, owing to the great crops of fruit it bears. It will also succeed on rich, sandy soil. Plum trees are usually planted when two years old from the bud, although some of the strong growing kinds, Burbank, Abundance and other Japan kinds, especially, may be planted a year old with good results. Plum trees are planted about as far apart as peaches; that is, from 15 to 18 feet apart each way. Many growers prefer to plant them closer one way than the other, and eventually to stop cultivation in one direction. If this system is used they may be placed 18 or 20 feet apart one way, and from 10 to 12 feet the other way. The trees are pruned the same way that apple trees are, when planted.

## Cultivation of the Plum.

As a general rule our orchard trees, after being set out, are left entirely to nature, and when the question of pruning comes, as it frequently does in discussions before horticultural societies, it is interesting to note that no one can give any sensible reason for advocating pruning on the one hand, or no pruning on the other. But the plum is a tree that is especially healthful only when a limited number of branches are left on the trees; and for this reason the weaker and poorer class of shoots should never be allowed to exist. When the trees are young, one should keep an eye to the branches that are likely to be the most vigorous, and many of the weaker ones should be at once taken away. This suggestion is, in a measure, true of all fruit trees. A limited number of large, heavy, vigorous leaves is of much more consequence to the vital power of the tree than a large number of half-starved leaves would be, but true as this is with

most fruit trees, it is particularly true of the plum. The go-as-you please style of raising plum trees rarely results in remarkable profit.

## Plums for Business Orchards.

For years the culture of the plum was largely confined to the region adjacent to the Hudson river. Indeed, commercially considered, the business may be said to have had its conception there, from which it has moved westward, and to-day has become one of the largest of the fruit-growing industries. The European sorts, comprising a few varieties only, are principally grown and will be for years to come, while the advent of those of the Japan type has given a fresh impulse to the business that is likely to continue.

Mr. Williard said he was one of the first to introduce Japan plums into western New York. He began with Abundance, which was of fine quality, but did not stand shipment so well with him as Burbank. Burbank blossoms later and is not so liable to be injured by late frosts, and this has been with him the favorite market variety bearing annually crops which have sold at profitable prices. He is not troubled with rot. He employs boys to go over the trees and pick off fruit which has been stung with the curculio, and which here and there shows rotten specimens, which if not taken away will communicate the rot to other fruits upon the same trees.

Red June is perhaps the best of the Japan plums. While not a large plum it is the first to ripen, which is about the 20th of July, and it meets with a ready sale at profitable prices. It is a hardy tree and a variety that has come to stay, says Williard.

If you have certain plum or pear trees, or a certain variety of grapes that do not bear fruit and have not done so for years you should suspect that the blossoms of these trees or vines are not self fertilizing. The remedy consists in planting other vigorous varieties near by that their sterile blossoms may be fertilized. In planting orchards it is well to have different varieties in alternate rows for the purpose indicated.

## Plum Culture.

Plums are a desirable attraction to any home. I can remember the plum trees which furnished such delectable fruit on the old farm homestead, where I was born fifty years ago. I remember today how those fat, yellow, juicy plums



tasted to me as a boy. Remembering this and remembering that children enjoy such fruits far more than older people I have ever placed an abundance of fruit in their reach.

About twenty years ago plum culture was almost abandoned owing to the depredations of an insect, the curculio which stung the plums early in the season, and seriously injured the crop. Currant culture was also abandoned owing to the currant worm, and potato culture was almost abandoned owing to the potato bug, but later it was learned that these insects could easily be destroyed, and that where large orchards of plums were grown, curculio was often a blessing in thinning out the surplus of fruit, since plum trees, more than any other fruit trees are liable to overbear; therefore, where plums are grown in orchards often no attention is paid to curculio; indeed, the curculio is not dreaded by any one in these days who understands its habits.

I grow the plum in my city yard, pay no attention to the curculio, and get an abundant crop. The plum comes into bearing at an early date, often two or three years after planting. The trees can be planted more closely together than the apple, pear or cherry, the branches not being so wide spread. Do not fail to plant at least a few plum trees.

### A Plum Question.

My young plum orchard is thoroughly hoed and tilled until July 25th, when all cultivation is stopped. I manure each spring with wood ashes. The trees make a growth of five to seven feet each season. I cut back the new growth to two feet and thin out branches when necessary. Is this good treatment?—E. Meaker, N. Y.

Reply:—Your plum trees are making excessive growth. I assume that they may be the Burbank or some other rapid growers. Trees growing so rapidly do not bear fruit so early as those that grow more moderately. The average variety of plum when five or six years old does not make a new growth each year to exceed twelve or twenty inches and does not need much nipping of the ends of the branches when only moderate growth is made, but such rampant growers as Burbank must be headed back each year or they would sprawl over too much ground. Stop cultivation earlier.

### That Plum Tree.

I come to you for aid or advice about my Coe's Golden Drop Plum. It is a

fine large tree ten years old—has never had any plums till last year; a few hung on till as large as a small peach seed, when all dropped off.—Mrs. Mary Fiser, Indiana.

Reply: It is possible the soil in which the plum tree is growing is too rich, owing to its being located in the poultry yard, and that this is the reason why the trees drop their fruit. Subscribers to Green's Fruit Grower often inquire why certain trees should not bear more fruit, or why the fruit should drop, or why the blossoms do not set fruit more bountifully. I do not doubt that in many instances such unfruitful trees are located in very rich ground and are growing too rapidly to produce fruit. When trees are growing rapidly they do not form many fruit spurs. It is only when trees are somewhat retarded in growth that they come into active fruiting; this can be shown by fastening a wire tightly about the branch of a bearing tree, or by girdling the tree or branch itself. Such trees will blossom profusely and set an abundance of fruit; vigorous growing trees are sometimes brought into bearing fruit by digging a trench around the tree about three feet from the base of the trunk, thus cutting off many of the feeding roots and bringing the tree into early fruitage. Pruning the tree when in leaf, might have the same results since it would interfere with the vitality of the tree.—Editor.

### Plums Abundant Bearers.

No fruit on the grounds was so abundant and fine as the plum crop. Of the fifty varieties that fruited ten were of the Japanese varieties.

The fruit on all of the trees was thinned, resulting in larger size, and most of the varieties ripened, though some of the fruit rotted badly. Of the varieties most affected by the "brown rot" or monilia were the Lombard, Pond's Seedling, Yellow Egg, Imperial Gage, Washington, McLaughlin and Spaulding. The fruit on those trees most closely planted or growing in sheltered, rather moist situations, was most injured by the rot; that on trees growing the most rapidly rotted more than that grown on trees of only a moderate growth.

Black-Knot: One of the results of the use of fungicides on the plum trees in the station orchard has been that scarcely a specimen of the black-knot can be found on any of the trees, though no knots have been removed for about a year.

Fertilizers used on the plum trees were:

Two to three pounds sulphate of potash, or one to two pounds nitrate of soda, or two to four pounds acid phosphate, according to size and vigor of tree.—Massachusetts Bulletin No. 62.

### **Large and Juicy Plums.**

The genial Captain Low had just returned from Lewiston. In reply to the request of the reporter as to whether he could spare time to show him through his orchard, he said he could, and soon the newspaper man was devouring the most delicious plums and listening to the pomologist as he told of the several varieties and their histories, with many interesting points about the way in which they had been nurtured. The visitor can go all through the plum part of the orchard and not once be out from beneath the overhanging plums, while there is also room for a handsome flower garden and pear and apple trees, with a berry department, where great raspberries, strawberries and gooseberries, each in its season, supply his table and more too. The walks of the orchard and garden are paved with concrete, and it is indeed a pleasure to pass about and look at the ripening fruit, the work of nature about done and only waiting the hand of man to pick it.

### **The Plum Delicious.**

I saw some plum trees loaded with fruit the other day, and what struck me as strange, the trees were also loaded down with iron rings, hoops, chains and kettles, and numbers of yeast-powder bottles and dead insects. What could it all mean? "The bottles of sweetened water were to catch insects when on their way to sting the fruit," I was told, "and all the old bits of iron to keep the fruit from dropping off." Now, I can understand how an insect should prefer some sweetened water to a half-ripe plum, but must confess I cannot understand why old iron should keep plums from falling. But some one comes to the front by saying "that insects in trying to pierce the iron, become discouraged and fly away to other trees, which offer no such impediment." If such be the fact, it must be a very good thing to do, and worthy of being imitated, as there is great profit in plums if they can only be coaxed to remain on trees until ripe. There is no preserve

more delicious or more stimulating, and plums of all kinds command good prices at any time. I remember that my mother had, in a village garden, two yellow gage trees, two blue plums, and one gray one, and that we were always supplied with good plum preserves, besides having several spare buckets to sell. Soil adapted to apple trees is generally good for plum trees.—Mrs. A. E. C. Maskell.

### **Money in Plums.**

By A. A. Halladay.

While living in the village I planted some seventy-five plum trees on a portion of my lot, built a fence around them and kept hens among the trees. Most of the trees were Lombards, and by close pruning and thinning of the fruit I got good results. Many of the trees commenced to bear the second season after planting. I remember one tree in particular that gave me a half bushel of beautiful plums the next season after it was set out. It was a Geuii, but it nearly killed the tree. Another tree (a Lombard) produced four bushels of plums, so it will be seen that there was money in plums. The last season I lived on the place I got about 75 bushels of plums from the 75 trees and several of the trees were not old enough to bear. The next season it was estimated that there was 100 bushels, and now after six years the orchard, owing to neglect of its present owner, is well covered with black knot and worthless. This orchard if properly cared for would have given an annual income of at least ten per cent. on the money paid me for the place, and three days' work each year, (aside from picking), would have been all the time required to have kept the trees in first-class shape.

### **My Opinion of Plums.**

Of the older varieties of plums Lombard stands at the head of the list here. We already have quite a large per cent. of this variety and shall plant 100 more this spring. When we first commenced planting trees on this place we put red raspberries in between the rows of trees on a part of the lot, but I would not do it again, or advise any one else to do so. Trees planted the next spring with no raspberries among them are certainly twice as large, and have given me ten times more fruit than those where there were berry bushes.

We ran the cultivator in them as long as we could, and have manured the land



well, yet the bushes seem to get the best of it. We will root out the raspberries after this season and give the land up to the tree and hens. I believe it is better to get one good crop of fruit from the land than two poor ones, although we should not complain much for we have got each year a fine crop of berries that have brought good prices.

Of course in the past seven years we have done a good deal of hard work, but at the same time we have derived a great amount of pleasure from our work. We got our boys out of the village where they have grown from puny, spindle-legged, pale-faced boys to stout, broad-shouldered, rugged fellows who would not exchange their home for anything the village could offer them. They are acquainted with the land, the woods, the flowers, the birds and the insects for miles around us. They take an interest in the place because they have a portion of the income for their own.

Another source of great satisfaction to us is our orchard of fruits, the trees were first-class in every respect so far as one could judge when they came, but when they came into bearing they proved to be true to name and as fine in fruit as in tree.

Japan plums are making a good record over a large extent of this country, even in the Rocky mountain region. These plum trees bear at an early age and bear abundantly; the fruit is exceedingly beautiful, of fair quality, and is especially desirable for canning. Indeed, these Japan plum trees bear so abundantly they sometimes cause a glut in the market during a season when plum orchards are bearing heavy crops as they did this year. The Japan plums do not rot so easily at Green's fruit farm as the other varieties. We can pick Japan plums a week or two before they are fully ripe. They have the faculty of ripening up nicely after being thus early picked, and are not so liable to rot when picked very early.

### A Family Plum Orchard.

There are three distinct classes of cultivated plums in North America. The first in point of importance, as well as the most delicious in quality of its fruit, is the European type which is known to science as *Prunus domestica*.

Under this head comes Lombard, Imperial Gage, Bradshaw and the Damsons. Many of the varieties of this species are called prunes, but popular as this title is, I think it alike confusing and useless. A

prune is a plum and any plum might be called a prune (*Prunus*), but as plum is the more commonly used, I can see no reason for retaining the term prune in our language as the name of a class of fruits, longer than we are forced to do so. (In continental Europe all plums are called prunes.) It is a distinction without a difference, for I have never been able to observe or to have pointed out to me, any characteristics of the fruits called prunes, that is not found in those called plums.

### Plums in the Chicken Yard.

Theories vanish by the side of facts in every avocation. I have at the present writing three plum trees loaded with ripening fruit, and two others with not a plum left. The five trees were set on the same ground seven years ago and have had the same culture. The same results have been derived for the past three years, the three trees bearing a full crop of sound plums and the two a crop of wormy fruit, worthless. The three fruiting trees are in the chicken yard; the others, outside. The ground in said yard is not plowed, but early in the spring is swept and kept hard and smooth. Under these trees I scatter bran and screenings, and "biddy" does the work of eating the pestiferous insects. While looking for the little seeds and specks of bran she garnishes her food with the spicy curculio. I know this to be true, for I have the evidence. Now, for seven varieties of plums I must speak a good word for the Robinson. It always produces. I have Wild Goose, Marianna, English Blue, Lombard, *Prunus Simoni*, etc, but the Robinson gives me the only crop in this year of '93. I have been out with saw and lumber this morning and propped up the limbs that are hanging almost to the ground with tempting fruit. Even the chicken yard is not a sure defense with other varieties this year, but the Robinson, where plenty of fowls are enclosed and fed, will not disappoint the planter.

### Top Grafting Plums.

Many farmers who have good orchards suffer loss by allowing a few trees which bear worthless fruit to remain year after year. When this poor fruit is about to fall the owner resolves to change the tops next spring by grafting, but before the time comes around he has forgotten his resplution and the tree remains. This may be prevented by placing some per-

manent mark on them or "blazing" the spare branches.

In inserting the grafts the common mistake should be avoided of setting them out at some distance from the center, thus allowing much of the defective growth to remain after all. Select shoots never more than an inch or two in diameter and make short stumps of them for inserting the grafts. A round and compact head may thus be given. If a sufficient number of grafts are set the fruit may be changed in a very few years from the useless sorts to the best by this operation.—"Home and Farm."

### Pruning Plums.

The plum tree came next for treatment. The heavy crops of two successive seasons, the neglect of pruning last year, and the gaps caused by black-knot excisions had given some of them a rather unsightly appearance. A lighter pruning would probably have increased the chances of a larger yield next year, but that the trees received will be of more lasting benefit to them. With so much shortening in and removal of boughs bent by weight of fruit, the branches look stubby and the trees rather bare, but they are now in shape, and will render a good account of themselves two years hence, at any rate. The top shoots, two feet or more long, were taken off just below where they were shortened two years ago and all reached with a Waters pruner with a handle of ten feet. Plum trees, according to my experience, are improved by liberal pruning if judiciously applied, yet trimming only is resorted to in very many orchards, the trees soon showing a lot of long, naked limbs. All the limbs of my Lombards are kept covered with fruit spurs (trees now nine years old), new ones replacing those that have borne, which would not be the case, it seems to me, without considerable pruning. I have rarely had trouble with gumming, never having to take off large limbs.

Among my notes on plums is one which is apparently at variance with what Mr. Galen Wilson says that "certain roots furnish nutriment for certain branches, and that it does not go into the common stock for general support of the tree, its foliage and fruit;" that is, that if the land on one side of a fruit tree is manured and cultivated and the other not, the limbs on the manured side should be larger, the foliage thicker and more luxuriant.

### Pruning Japan Plums.

First, I buy small or medium trees from the nursery so as to be able to start them in the way I like them to go. I like a plum tree with a low down branching head. I cut them back severely at the time of planting, shortening back all side branches and often cutting back the main stalk to a stump. This treatment will give a vigorous growth the first season, varieties like Burbank often sending out shoots three to four feet long. My after treatment of all plums consists in cutting back all the previous season's growth from one-half to two-thirds in length. Of course, entirely removing all superfluous limbs, and thinning out the branches so as to leave an open head. Such sorts as Abundance, Chabot, Wickson and some others are so close growing that it is a very difficult matter to make them grow in any but an upright form. The Chabots and Wicksons seem to be the worst in this respect, while the Burbank gives me my ideal tree, the limbs being strong and sturdy, and joined to the main trunk in such a manner as to be able to hold its immense loads of fruit without danger of splitting down.

It should be remembered that the fruit of a tree well and properly pruned is more than half thinned, the fruit is in every way superior to that from the unpruned tree, and the tree will live longer and produce more and better fruit, which will bring a higher price in the market.

As to the best time to prune plum trees I would prune any time when the trees are dormant and are not frozen. I usually do this work on warm days in the spring before the snow is gone. At that time we have more time to spare and the cuttings are more readily gathered up from the snow. This season my Japans have done better than the older sorts and have been very large and fine.

The plum crop has not been a large one in this section and the season has been one of the driest in many years. Many strawberry fields are nearly ruined and the outlook for next season's crop is not promising, but thanks to frequent and shallow cultivation my own fields have never looked better than now.

### A Few Good Plums.

The Reine Claude is generally counted as a short-lived tree. Its tendency is towards heavy bearing and unless the fruit is thinned the tree soon exhausts



itself. With proper thinning and good culture, care and feeding the Reine Claude may be made to live and produce profitably for a generation. The great plum grower of Western New York, S. D. Willard, had, a few years ago, some Reine Claude trees which had been set twenty-two years and borne seventeen full crops. They had failed only one year after coming into bearing. When I saw them they gave indication of still being profitable for several years.

The Japanese plums as a class have proved their ability to resist the black knot. While here and there a few knots have been found they are scarce and not serious enough to make any count of. Still they disprove the claim that the Japs are black knot proof. However free they may be from this trouble they have a decided susceptibility to the rot. They also set the fruit so thickly that it touches all the way along the limbs. But careful thinning and spraying with the Bordeaux mixture will check the rot. Another bad fault is the early blooming of many varieties. A late frost will often catch them and destroy the entire crop.

### Plums for Michigan.

The Michigan horticulturist experiment station says in a recent bulletin that the best varieties for home use and market are:

Red June. The best early Japan plum



**RED JUNE PLUM.**

on trial. The tree is a fairly vigorous grower and an abundant bearer. Fruit medium in size, cordate, elongated at apex; color red, attractive; quality quite good; season late July. Valuable for early market.

**Abundance.** One of the best known and most extensively grown of the Japan plums. Tree readily distinguished by its upright, vigorous growth and reddish colored shoots. Fruit yellow, shaded with red, somewhat tender, juicy, of good quality. Season early August.

**Satsuma.** A vigorous, upright, spreading grower, usually quite productive. Fruit large, roundish; color dark, purplish red; texture tender; flavor mild, vinous. Flesh of this variety is dark purple. The best variety in the station collection for culinary purposes.

**Burbank.** A remarkably vigorous, spreading grower, very productive. Fruit roundish, tapering slightly toward apex; color dark red on yellow ground; texture tender; adherence, cling; quality good. Stands shipment well and is particularly valuable for market. Trees require severe heading in to keep them within bounds. Season late August.

### European Plums.

**Bradshaw.** A valuable early market variety, ripening the last of August. Tree upright, slightly spreading, vigorous, productive. Fruit large, very attractive, oval, reddish purple, of good quality.

**Lombard.** An old, well known variety extensively grown. Ripens at a time when plums are usually plentiful and most apt to be cheap. However, the Lombard sometimes fruits when nearly all other varieties fail as has been the case this season, and it is desirable because of its hardiness and regularity of bearing. The fruit is medium to large, roundish oblong, purple in color, of good quality. Season early September.

### Lombard Plum.

The Lombard is a great favorite for the following reasons: The tree seems to adapt itself to any locality; it is extremely hardy, producing good crops where many varieties will not grow; it is a strong growing tree—trees on our grounds five years of age being as large again as some varieties planted the same year; it is exceedingly productive. My experience has been that it outyields most other varieties, and yet all varieties of plums are remarkably productive. It is not equal to some varieties in qual-

ity, and yet it is enjoyable eaten out of hand and desirable for canning and other domestic purposes. Those who are not familiar with the superior virtues would consider this delicious. The fruit usually hangs so thick on the limbs that we are compelled to thin out one-half. The more you thin it, the larger, brighter and better the remaining fruit will be. It is a handsome reddish plum, the flesh yellow, juicy and pleasant. Season—August. More than one of the leading fruit growers have planted the Lombard tree especially for a stock for top budding and grafting slow growing varieties, and it is one of the most vigorous growers, and gives great satisfaction for this purpose. It is an excellent variety, and should be planted in all gardens and orchards. It can be relied upon for a crop often when some other varieties fail.

### **Wickson Plum Hardy.**

This hybrid, one of Burbank's creations, is worth trial, even in North Iowa. The actual test of its hardness can alone decide the question of value for us.

The desirability of plums, twice the size of our best Americans, is not debatable. Encouraging reports of its value come from Illinois and New York. But, even while it stands 25 degrees below there, it may not survive our windy, arid winters. Who has had experience?—Iowa "Fruit-man."

### **The Japanese Plum.**

Mr. J. H. Hale is satisfied that the Japanese plum in Georgia will form a more profitable market fruit even than peaches. The trees are strong growers and come into bearing a year after planting; in two years they yield half a bushel each, and more, of course, as they grow older. The fruit, as grown in Georgia, is very large and brilliantly colored, and has a tough skin that makes it easy to ship. Such varieties as the Burbank, for example, if picked while green, but fully grown, and wrapped in paper, can be carried for two or three weeks and will yet ripen into a rich, sweet fruit with fine color. The season of shipping ranges through June and early July. The Willard ripens about May 20th, the Abundance from June 10th to June 15th, and the Burbank some ten days later.

### **How I Raise Damson Plum.**

There is no fruit grown that responds in a more liberal manner to high cultivation and generous care, or offers greater

profit than the plum. I have over 600 plum trees planted in good rich clay soil that is well drained, for low wet soil will not grow the best plums of any variety and a sandy soil harbors too many insects that are injurious to fruit and trees. The comfort and propagation of curculio is fostered by all soils of a light texture, while clay holds more moisture than any other soil and of this element the plum needs a great deal to do its best.

Cultivation is an all-important factor in plum raising, for a failure in this respect means a failure of the crop. I cultivate my plum trees oftener and better than corn. The cultivator is run up to July 1st and soon after a mulch of coarse manure or partly rotted straw is applied to retain moisture in the soil to manure the crop as well as to mature fruit spurs and buds for the following season. In the fall a light coat of barnyard manure is applied and in the spring a quart of salt per tree broadcasted as far as the branches extend. This promotes the health and growth of the trees and from the dislike that insects have for this substance drives away if not destroys many that attack both tree and fruit.—"Farm Home."

### **York State Prune, Large, Beautiful and of Superior Quality.**

York State is one of the largest, best in quality and most productive of all prunes or plums. Size large; color dark blue,



**YORK STATE PRUNE.**

covered with purple bluish; flesh yellow and delicious, freestone, ripening the last



week in August, at Rochester, N. Y. This prune originated at Dansville, N. Y., where it is has been grown largely by the Germans, who are great fruit growers. It is a seedling of the German prune and has been sold by these Germans for German prune to Buffalo fruit buyers in large quantities at profitable prices. It resembles Fellelberg more than it does German Prune. York State Prune is a vigorous grower, and is healthy and hardy here at Rochester, N. Y.

### American Plums.

An important class is our native plums, although they have but recently been taken from the seclusion of the woods. They comprise several botanical species to each of which belong a number of cultivated and well-tested varieties. They are inferior in quality to the European, being sour, and some kinds are even bitter; but they are far too good to be left out of even a small collection. The fruit is not seriously injured by insects. Of these species, *Prunus Americana* is by far the most extensive in its climatic range and list of varieties. It is found as far north as Manitoba, and extends almost continuously from there to Northern Mexico, and eastward to Massachusetts. While its varieties will succeed in almost every habitable part of North America, they are especially adapted to the Northern Mississippi valley, which is the principal region of their natural growth. From Iowa northward they are almost the only plums that will endure the severity of the winters. In season of ripening, they are decidedly later than all other native plums, and vary in this respect but little from each other. For the benefit of those who live in that trying climate the following list is given:

Deep Creek.	Yosemite.
De Soto.	Quaker.
Forest Garden.	Rollingstone.
Cheney.	Weaver.

### German Prune.

Sells for higher prices in market on account of high quality. A leading favorite. There is no easily grown fruit that gives greater or more certain profit than the German prune. They were introduced in this country by Germans many years ago, and for a time these furnished the only market for them. But the prune as a fruit for drying has en-

tirely surpassed the plum, and though it is always dried whole, the seed is not troublesome to the eater. The Pacific Coast states have furnished most of the prunes for commerce. But it is a fruit that succeeds equally well in the East, with the advantage that if more grown near our large cities, there will be considerable demand for the fruit for eating when ripened, but not dried.—American "Cultivator."

### Thanksgiving—A Valuable New Prune.

In size the Thanksgiving prune compares favorably in size with Grand Duke and Burbank. The size is much larger than Lombard. Mr. Gridley says that these trees have borne prunes as large as the French prune. There seems to



**THANKSGIVING PRUNE.**

be no question about Thanksgiving prune being a genuine prune. To me it seems of better quality than the German prune, and more sugary. The meat

is firm and parts freely from the stone. Judging from the fruit I saw on these trees I should think that good prunes can be gathered from these trees as late as the 10th or 15th of October, although the usual season for ripening is October 1st. The numerous trees of this prune as grown here are very healthy. The foliage is fully ripe and is of dark green, somewhat resembling the foliage of Lombard. The peculiarity of this plum, which, in addition to its productiveness, good size and a superior quality is that it does not rot like ordinary plums but will keep for weeks or months in an ordinary room, the fruit being so well supplied with sugar prevents it from decay. After standing some time the fruit will shrivel and ultimately will evaporate entirely. But in a suitable storage room the fruit can be kept in eatable condition for weeks and months. Fresh fruit has been eaten January 1st.

### **Purple Leaved Plum.**

Among all the purple leaved trees and shrubs, and the list is very large, there is none better than the purple leaved plum, or *Prunus Pissardi*. There is not a purple leaved plant in cultivation here but that loses its deep color more or less as the season advances, aside from this plum. This new, small-sized tree is of a deep, reddish purple, and this color it holds until the leaves fall in autumn. It is a variety of the *Myrobolan* plum, a sort well known for its bush-like habit of growth, and the purple variety retains this desirable character. Standing among ordinary trees, it is in striking contrast to them, and can be distinguished a long way off. Trees cost only 25 cents each.

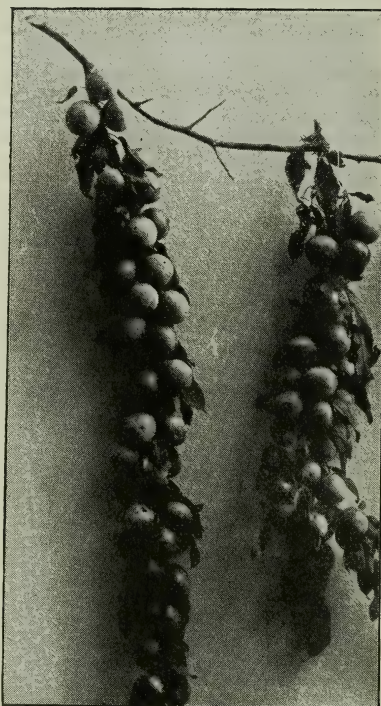
### **Plums' Hardiness Compared With Peaches.**

**They Stand the Cold.**—I am growing these plums in orchards quite extensively in Connecticut and in Georgia, and am convinced that many of the varieties have points of merit that will make them permanently valuable orchard fruits in these two sections, but in the Central Atlantic states, say from south of Philadelphia to South Carolina, they bloom so early that they are often liable to be caught by spring frosts. At the north they will stand a great deal more freezing than peaches. I think it is safe to plant them anywhere where the mercury does not go much below 25 de-

grees below zero. In my orchards in Connecticut at this time, peach buds, even on the most hardy varieties, are all killed, and while the plum buds are hurt somewhat, there are more than enough left for abundant crops; probably very severe thinning will have to be resorted to to secure full size fruit.—J. H. Hale.

### **Abundance Plum.**

Our correspondent, who is so greatly in love with the Abundance plum, says some true things, as well as good things about it. It is well to remember, however, that there are many other favorites in the list of plums. Burbank succeeds beyond measure with some growers. Still others say the old Lombard is most profitable of all. Some have made most money out of Wild Goose. And so it goes. The fact is there exists an end-



**ABUNDANCE PLUM.**

less diversity in the adaptation of special plums to particular localities; and these adaptations must be studied by the plum-grower. No general recommendation of any one variety for all farms and all climates is safe. There



are lots of good varieties, but the best of them fail in some localities. There is no variety which seems to succeed over a wide range of territory like the Ben Davis apple or the Concord grape.—Country Gentleman.

### A Talk on Varieties.

I suppose it is unnecessary to extol the virtues of this well-known variety, but I so often see others planting orchards with other varieties that it must be many do not yet understand what they want. An orchard of good Lombard trees will yield results satisfactory to any one. I do not mean to advise that no other varieties should be planted. This is a mistake in any fruit orchard. But the Lombard should be in the majority. It stands, in my estimation, at the high-water mark. Three varieties of plum trees should at least be planted in every plum orchard, and for general market use none better can be found than the Lombard, Niagara and Damson.

The Bradshaw is a plum of a very fine quality, and has the advantage of producing a crop early in the season, but these qualities are offset by its shyness in bearing. Its crops are not large nor very regular. If it could be made prolific it would be an excellent variety. Almost the same can be said about the Yellow Egg and the Washington. They are excellent plums, very large and delicious, but they are not profitable for market use. A few trees for home consumption would be appreciated on any farm. The Purple Egg is also a fine large plum, but the tree rots so badly that it nearly discourages one in raising it. If the trees could be hardened in some way so that the rot would not attack them this variety would be exceedingly desirable. Geuli is a large purple plum that has this same fault of being attacked by disease. The black-knot is sure to kill the trees early in life. The Green Gage and Imperial Gage are splendid plums for canning, and should be raised largely for this purpose.

The Shropshire Damson is a splendid market plum. It is a small purple plum, and rather coarse to suit the writer's taste, but it sells well and is a very prolific bearer. A garden of these trees will pay any one. The Lombards are the most desirable market plums going, and with a little proper care the trees can be kept free from disease. Both of these varieties are good bearers, the trees are moderately hardy, and comparatively free from all diseases. As the black-knot is the great trouble with most grow-

ers of plums, the trees that are very susceptible to this disease should not be selected. There are others that are quite proof against it, and most other parasites.—Germantown "Telegraph."

**Shipper's Pride Plum.**—This large, round, purple plum is recommended for its certainty to produce a long crop of fruit, for its fine appearance and superior shipping qualities. The flesh is firm and of excellent quality; the tree is a strong, upright grower. In north-western New York, where it originated, it has never failed to produce a heavy crop since the original tree was large enough to bear. A plum that will produce large annual crops of large, handsome, good fruit, is indeed an acquisition.

**Moore's Arctic Hardy Plum.**—Valuable for its productiveness and extreme hardiness. Fruit grown in clusters. Color dark blue or nearly black when fully ripe. Dr. Hoskins says this is the hardest plum he has tested, and others make the same report. The heavy demand for the trees of Moore's Arctic indicates its popularity.

### Bradshaw Plum.

A very large and fine early plum, dark violet red, juicy and good. Tree erect and vigorous; very productive; valuable for market. The tree is very hardy and vigorous. As regards productiveness it is unequaled by any plum we have ever

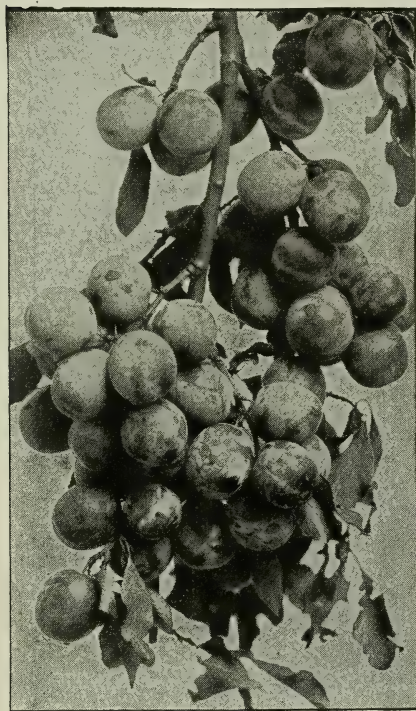


fruited. To produce the finest fruit, heavy thinning should be practiced. The quality is excellent, and it is destined to become one of the most popular of all plums for canning, while its attractive color, good quality and shipping prop-

erties will cause it to be sought for as a market variety. It ripens ten days to two weeks later than Abundance. This plum resembles Niagara in size, color and general good qualities. It is a grand variety.

### **Japan Plums in Colorado.**

I have many varieties of Japan plums growing and have found several that are of no use here owing to lack of hardiness, both of tree and bud. Red June is all right and should be extensively planted, also Willard and Ogon. These are perfectly hardy and will please all who give them a trial. Burbank is also quite promising. Hale and Wickson no earthly use in Colorado; trees won't stand even zero weather. Satsuma badly killed this year, though they bore some fine fruit last year. I shall plant largely of Red June and Ogon.—Yours truly, E. Ford Jewett.



**BURBANK JAPAN PLUM.**

### **Japan Plums for Vermont.**

Are they hardy? I have fruited Burbank and Abundance for several years. Satsuma I have tried, too, but as yet

have never succeeded in getting a single blossom and do not expect to in this climate. Red June, Wickson, Hale and Chabot are hardy in tree, but I have no trees of these varieties that are old enough to fruit. My faith in them is good enough so that I expect to plant quite an orchard of them this spring. I shall expect to find them as hardy as Burbank or Abundance, which are certainly as hardy here as any plum I have, and I have most of the leading European sorts. During the winter of 1897 and 1898, the thermometer went to 26 degrees below zero at my place, yet my plums were not injured in the least, and I got a very large crop. The past winter has been very severe, yet I brought branches of Burbank in my house that bloomed fully, showing that all the buds, or practically all of them, are uninjured. Branches from Abundance brought in only a few days ago, will soon be in bloom.

I have no doubt the mercury has been down to 30 degrees below zero in the orchard, as it has been reported as low as 40 degrees below about here, and the ground has been covered with snow since November 24th. I have had reports from many parts of the country claiming that all plum buds were killed, some of them from places where the thermometer has not reached zero. I cannot believe that this would happen if the trees were properly cut back and pruned.

### **Plum Trees in Ohio.**

Some of the varieties of our native plums and some of the Japanese will usually be found to be the most profitable generally, though where care is given to protect from the curculio, the fine European sorts are quite profitable. Some of the Japan species may not be hardy with you, but most of them will be. The best paying plums are the Abundance or Botan, the last a Japan sort that will do well with you. I found long ago in Maryland that the German prune was a very certain and abundant bearer, though not so showy as some others. The following Japan plums will doubtless do well in your latitude: Abundance, Burbank, Satsuma, Ogon, Willard and Berger.—"Practical Farmer."

### **As to Plum Orchards.**

1. Where possible select a north slope with rich soil for the plum orchard. If shelter is given let it be on the east side, as protection from each storm during the



blooming period appears to be an advantage.

2. In practice in our state the best results have been reached by planting rather thickly in the rows running north and south, and giving more room the other way for letting in the sun between the rows, and air circulation. Trees planted ten feet apart in the rows, with space between the rows of twenty-four feet have given the best results.

3. The alternating of varieties in the rows, with a view to more perfect fertilization of the blossoms, is also an advantage. With some varieties the mingling of varieties is absolutely essential, and I believe it to be an advantage in all cases.

4. The need of very low tops is quite as apparent as with the cherry. I know of no variety of the native or foreign plums that will prove long lived and fruitful with a high exposed stem. If it does not develop the fatal gumming on the south side, the main growth of wood of stem and top will soon be on the north side.

5. It never pays to market plums in rough tubs, baskets or boxes, as is so often practiced. The commercial crates and boxes are now too cheap to be dispensed with in shipping any of the stone fruits.

### Why Shall I Plant Plums.

Here in Iowa the plum ranks next to the apple in value, and, excepting the cherry, there is no fruit more easily grown. The trees begin to bear much earlier than apple trees, need little or no pruning and are not preyed upon by borers, mice, rabbits, blight or sunscald. The ripening period is so long that fresh fruit may be had for nearly two months each season, and when eaten raw a good plum is almost as good as a peach. Plums make excellent jelly, preserves and butter, and of all fruits they are perhaps the easiest to keep by canning. When all these points are considered it is a wonder that every farmhouse in Iowa is not supplied with an abundance of this delicious fruit. Yet five years ago there were only 217 bearing plum trees in Howard county and less than 1,000 in each of the five other counties. On the other hand, Buena Vista, Monona and Pottawattamie counties each had over 20,000 bearing plum trees. Here in Tremont county a single grower, C. R. Frazier, sold 1,000 bushels the past season.

In Iowa we must rely on the native varieties, the best of which will compare favorably with the Japanese and European sorts. The De Soto is a native variety which originated in this state and is undoubtedly the most popular and

widely grown plum in Iowa. The three next best are Miner, Hawkeye and Wyant. Other excellent varieties are Wolf, Forest Garden and Stoddard, all of which may be depended upon to bring pleasure and profit to the planter. The Wild Goose is another of our very best plums, but is too tender for the northern part of the state. A list of the best varieties must necessarily change from year to year, as new varieties of great merit are constantly being introduced.

If you are short on plums, make up your mind at once to plant some of the splendid varieties mentioned above. They will begin to reward you in a very short time, and then you can do as the little girl said: "We eat what we want, sell what we can, and what we can't we can."—O. H. Barnhill, Shenandoah, Ia., in "Farmer's Voice."

### Some Points in Plum Culture.

I believe the time has come when it is important in selecting sorts to plant, that quality and appearance should demand more attention than the selecting of very prolific bearers. I do not mean by this that you shall select such sorts as Washington has proved to be with me. Planted some fourteen years, with bodies ten inches through, they have never borne enough to pay for first cost of trees. But there are other attractive sorts, coming late, that will produce enough. Among those that I have tried, are Bavay, Cor's Golden Crop, Quackenbush, Pond, French Damson, and many other sorts I have not fruited.

I have now, what I may call the fifth full crop of plums in succession.

The plum is very likely to overbear, and in so doing only produces a crop in alternate years. I will give my mode of treatment, to which I attribute in a large measure my having a good crop every year.

I do considerable pruning and shortening in, sometimes cutting off ends of branches back to where they are an inch in diameter.

This is partly to avoid thinning, which I do not practice, as it is too expensive to pay. I believe it would pay to thin them by hand if one could do it without having to hire help; but to thin by paid help, it will not pay, as I have tried it pretty thoroughly.

It is all we can stand to thin the peaches, which we must do, and we find that quite expensive, as I have had four men at it two weeks and they can not see through yet. Then, as the plum is a heavy producer, I feed heavily with manure and ashes, annually, and give

the best of cultivation, as we must keep up the growth in order to get fruit buds for the next season's crop.

I watch closely for black knot, and cut it out in its first stage, when it looks like a brown wart, and by this means I have never lost a tree nor an important branch by this disease and I have found a little of it for twelve years.

I spray my trees with Bordeaux mixture, thoroughly before blossoming, and endeavor to do this as soon as the buds begin to swell. It is just as well, I think, to do this spraying still earlier, and I am not sure that it would not be just as effective to do it in the fall after the foliage had fallen. But whenever it is done it should be very thorough, the solution reaching every branch, and the body as well.

I believe this spraying will have much to do with preventing black knot and I know it will prevent leaf blight and rot.

I spray again, just as the swell is coming off the plum, with the same mixture, to which I add a quarter of a pound of Paris green to fifty gallons of the mixture. This I follow up two or three times, as the plum grows, aiming to keep the surface of the fruit covered with the solution. I know many will say this is useless against curculio; but as the boy told Professor Gulley, last winter, I know I get the plums all right, and that is the essential thing.—Paper by J. N. Stearns, of Kalamazoo, before State Horticultural Society.

Mr. Joseph Meehan has the following to say about the Japanese varieties of plum: "Looking over the field of fruits, I think the most notable advance has been made with plums. That the Japanese sorts are of great value is beyond doubt. Besides their excellent quality, they are most healthy growers, and they have proved quite hardy as far north as the vicinity of Lake Ontario, where many sorts have been successfully fruited. Then again, some of the sorts ripen much earlier than others before grown, one of them having ripened its fruit at Geneva, N. Y., as early in the season as the 15th of July.

### Plums for the Home or Orchard.

The Cornell New York Experiment Station in Bulletin No. 175 gives a valuable report of several Japan plums with illustrations. This bulletin I do not doubt our readers can get by addressing the above experiment station. Our readers are interested in plums. This is a valuable fruit. How well I remember

those that grew in my father's garden when I was a child. One of these trees I remember as bearing large yellowish green fruit something like Reine Claude. My mother prized highly the fruit of the plum tree. Where will you find a house-keeper to-day who does not think highly of the plum?

## DISEASES OF THE PLUM.

### Insect Fungus Attacks.

In our special page devoted to plum culture we deem it wise to mention diseases and insects which sometimes prey upon the plum. We do not desire, however, to frighten people so they will not plant this valuable fruit. We have grown plums at our Rochester fruit farm for many years and have had no difficulty of loss from the black-knot, from the curculio, or any other insect or disorder in the plum trees. There is not nearly so much difficulty in fighting the curculio as in fighting currant worms or potato beetles, or other ordinary diseases. In New York state we seldom pay much attention to curculio or black-knot, and our trees are not seriously affected. The plum is liable to overbear, thus if the curculio should remove half of the young fruit it would be a blessing. Black-knot occurs more often on old, neglected trees that have stood for half a century without attention. You can plant plum trees expecting to get good crops, and need have no fear of any disease, or insects, by serious damage.

The Curculio.—I read an article in a recent issue of your paper on the curculio, says a writer in Homestead, (Iowa). This pest begins on plums when they are about the size of a pea by cutting the skin in the shape of a new moon and depositing an egg in the center of said cut, keeping this up until the fruit is well grown and after. The best remedy is to tie a band of cotton batting about three inches wide around the tree. Very few beetles will crawl over it, but will creep under as far as they can and lay their eggs on the fork where they can do no harm. Tie another band about a foot above, a third the same way, and none will get over these bands to injure the fruit. This will work all right, provided no tall fences are near up which they can climb. Beetles can fly down but not up. Hogs in a plum patch are a great help at certain seasons of the year.—(The best remedy I know of is the jarring method.—Editor).

Plum Troubles.—The two principal troubles with the plum are the black



knot and the curculio, says P. H. Jacobs. Neither of them need be formidable. The black knot may be prevented or cured by promptly cutting off all on its first appearance and burning it. More commonly it is allowed to spread a year or two unobserved, and then it is justly pronounced a very formidable and incurable disease. Taken in time there is much less labor, to keep it under than to cultivate by jarring the insects down on stiffened sheets and killing them with the thumb and finger, or burning them. The jarring is effected by striking with an axe or hammer on iron plugs inserted in the main branches. It must be continued daily, or twice a day, as long as any insects are found. If intermitted the remedy will prove a failure.

### Spraying Plums.

Will you kindly give me information in regard to spraying the German prune to prevent the fruit from being stung. I have 200 trees six years from setting, and in a thrifty condition. Blossomed well and made a good setting of fruit last year but were all stung and dropped off. Tell me the proper time to spray and what to use when spraying.—C. E. Calkins, N. Y.

Reply:—It is not easy to succeed in entirely preventing prunes and plums from being stung with the curculio, or other insects, by spraying, and yet a thorough spraying of the foliage soon after the fruit sets seems to have a good effect, but precisely how is not known. It is thought that the best method of preventing curculio from stinging plums is by jarring trees.—the well-known old method.—Editor.

### Black Knot in Eastern States.

Before warm weather comes all the plum trees should be looked over, and any that show marks of black warts that indicate black knot should be removed with a sharp knife and the wound washed with carbolic acid solution or some other antiseptic. In fact, it is a good plan to spray plum trees with a carbolic acid solution, made one part of carbolic acid to 2,000 parts of water. This will remain on the spores which are dormant during the winter until they burst their bounds and begin to spread the disease over the tree. The solution named is much stronger than can be applied after the foliage is in its tender growth.

A Suggestion for Plum Growers.—Joseph C. Steele, a subscriber to Green's Fruit Grower at Camden, Ohio, writes us that he has made a specialty of plum

growing and has been successful. Plum growing with him has been profitable, there having been a good demand for the fruit fresh picked. During the season of 1904, when he had 1,500 bushels of plums which nobody wanted to buy, since the crop was so great in his locality and seemingly elsewhere. Not wishing to lose his plums he hired women to can his plums, putting them up in one-quart glass cans. The fruit was cooked in the cans in a boiler on the kitchen stove. He believes that these superior home-canned plums will bring paying prices.

Here is a suggestion for fruit growers everywhere. There is much prejudice against canned fruit put up in tin cans as usually prepared at canning factories, therefore home-canned fruit put up in nice clean looking glass bottles, labeled "Home-Made Product," surely must meet with a ready sale at higher prices than ordinary canned fruit. Much home-canned fruit is lost by using old rubber under the covers. It pays to use new rubbers and never to use the old ones. The wife of our editor has found that sweet plums make a better canned sauce than sour plums, and do not require nearly so much sugar. If our readers conclude to can fruit for the market we advise them to begin moderately the first year or two in order that they may gain experience.

Black Knot on Plum Trees.—At Rochester, N. Y., we are not troubled with black knot on plums, but we hear complaint from other portions of the country, particularly where plum trees do not receive cultivation. I have noticed that where plum sprouts grow up in the fence corners thickly, crowding each other as they grow older, and where the soil is left to grow up to grass and weed, where the trees receive no attention, that black knot sometimes attacks them. I recommend good cultivation, keeping the trees well pruned and sprayed. Under such treatment black knot will seldom appear, but if it does appear cut out all the affected branches and burn them without delay. Black knot is a fungus disease, and the bordeaux spray with a little paris green in it, tends to destroy fungus growth on both the leaves and wood. The paris green in the spray aids in exterminating the curculio.

### Black Knot a Fungus.

U. S. Department of Agriculture,  
Office of Plant Industry.

I am in receipt of a letter from Col. G. B. Brackett, pomologist of this depart-

ment, transmitting a note from you relative to knot on plum trees and requesting me to write you on the subject. That this disease is caused by a fungus is absolutely certain. The fungus is well known and has been studied by many investigators. Its contagious nature is also well known and the recommendations which you have been making are entirely proper. Your correspondent has evidently been misled by some error in observation.—Albert F. Woods, Chief of Division.

### History of Plum Curculio.

To understand some later efforts to destroy this insect, it is necessary to emphasize prominent traits of its life history. The fact has been established that it produces but one generation annually. The beetles hibernate under leaves or bark, in woods or sheltered places near stone-fruit orchards. They issue from such winter quarters as soon as or before the buds put out in the spring. Both the male and female feed on the tender foliage for some time before the females have a chance to oviposit in the young fruit. While the nights are cool they hide under any shelter within reach. Where the base of the tree is kept clean and the earth raked, chips laid around under the trees form a most satisfactory trap for them, as in the early morning they are somewhat torpid and easily killed. Later in the season the jarring process is one of the most satisfactory ways of securing an uninjured crop of fruit. The arsenical treatment is based on the habit of both sexes of feeding on the young foliage in the early season, and secondly, on the habit of the female gnawing with her jaws a crescent-shaped mark, in order to form a deadened flap around

the egg she has thrust under the skin of the fruit. One thing to be considered in the use of arsenites against this insect is the effect of those mineral poisons on the different stone-fruit trees. Spraying against the plum curculio is only partially successful, and the same may be said of other rhynchophori, or snout-boring beetles, which injuriously affect fruit, namely, the quince and the apple curculio and plum gougers.—C. V. Riley.

### Remedy for Plum Rot.

Dear Sir: There is no known means by which plum rot may be controlled to the extent that apple scab, for example, is controlled; but its ravages may be materially lessened by the following treatment:

(1.) In the fall, carefully remove from the orchard all mummied plums; because they harbor the fungus and in the spring become centers of infection.

(2.) Spray with dilute Bordeaux mixture as follows—First, about ten days after the blossoms fall; second, three weeks after the first treatment; and third, three weeks after the second treatment. Experiments made by the station show that this treatment will control plum leaf spot and at the same time somewhat check the rot. In case the blossoms seem likely to be attacked, also spray just before the blossoms open. It should be borne in mind that the foliage of plums, particularly that of Japan plums, is liable to injury from spraying. Also, the late applications of bordeaux mixture are liable to show on the ripe fruit.

(3.) Thinning the fruit will help to hold the rot in check.—Yours truly, F. C. Stewart.

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What this Offer Means : It means that you will receive two peach trees, two currant bushes, and two Liveforever rose bushes by mail in time for spring planting, and a paid-in-advance subscription to Green's Fruit Grower until January 1911.

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TWO Elbertas, One Late Crawford, One  
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delivered to your home, with all charges  
paid, in time for spring planting.

## To the One Receiving this Circular:

Should you be an old subscriber to the Fruit  
Grower, this offer is good with all past dues  
paid, providing you accept this offer within a  
reasonable length of time.

If you are not at present a subscriber to Green's  
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invited to accept it.

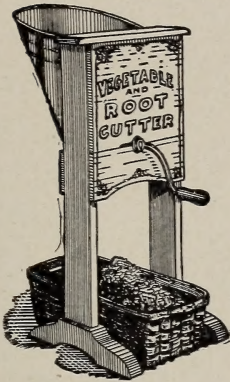
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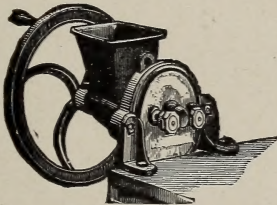
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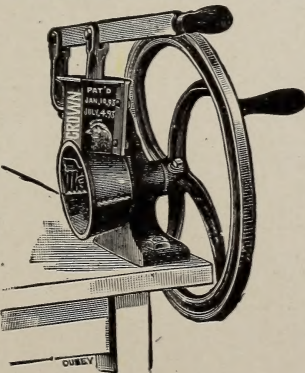
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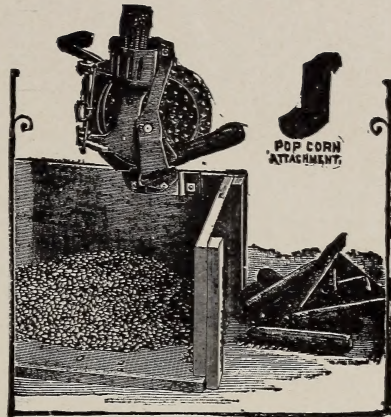
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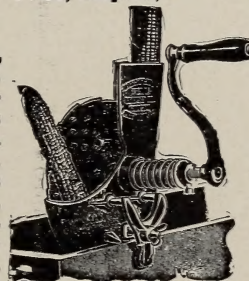
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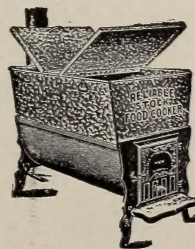
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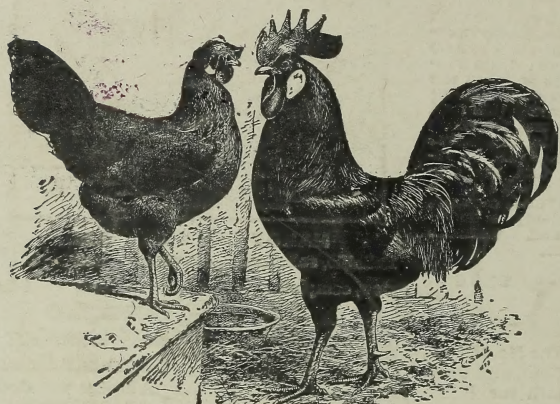
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